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# Air Quality in Ontario 1999
## Appendix

ONTARIO

Ministry of the
Environment

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## INTRODUCTION

This appendix is intended for use in conjunction with the annual report Air Quality in Ontario 1999. The first part of the Appendix briefly describes the provincial air monitoring network, the quality assurance and quality control procedures and data base. The second part of the Appendix provides a series of tables showing the station locations as well as a listing of the summary statistics including, means, maxima, percentile values and the number of exceedances of the Ontario criteria for each pollutant.

## MONITORING NETWORK OPERATIONS

### Network Description

In 1971, the provincial air monitoring network consisted of 254 instruments: 166 continuous analyzers at 76 monitoring sites and 88 sites with high-volume samplers. By 1980, the provincial network had reached its maximum size at 450 instruments of which 268 were continuous analyzers at 106 sites and 182 high-volume samplers. During 1999, the network consisted of 227 continuous monitoring instruments at 74 sites, 51 high-volume samplers, 27 daily $PM_{10}$ samplers and 27 real-time $PM_{10/2.5}$ monitors.

Ministry regional boundaries along with the Regional, area and district head office locations are show in Map 1.

More than 60% of all air monitoring by the ministry is source-specific and is the principal responsibility of Operations Division. For the most part, the operation of the monitoring stations and the collection of air samples is conducted by the regional staff. Environmental Monitoring and Reporting Branch operates the Greater Toronto Area (ambient stations) network and the mobile air monitoring units. The monitoring networks are classified by their functions: continuous air monitoring stations; non-continuous sampling sites; the toxic networks; and mobile air monitoring.

### Quality Assurance and Quality Control

In 1999, each region had an atmospheric and terrestrial effects unit responsible for the day-to-day air monitoring and maintenance.

Each day, the instruments are checked through a computerized telephone link by technicians confirming the automatic zero and span values (that is, a known value for a particular gas).

Regional technicians inspect and maintain the monitoring equipment and stations continually. If an instrument undergoes major servicing, the instrumentation and quality assurance unit will re-calibrate it.

Portable calibration equipment is used by regional staff. This equipment itself is re-calibrated at least twice per year.

There are other monitoring programs, such as those operated by the Lambton Industrial Society, Environment Canada and Ontario Hydro, which the ministry either audits or conducts comparisons with. It uses data from these services to judge provincial air quality.

The environmental monitoring and reporting branch operates a laboratory with gas reference standards that adhere to those of the U.S. National Institute of Standards and Technology (NIST) as well as to the pollution measurement division of Environment Canada.

Performance audits are conducted on the sulphur dioxide, nitrogen oxides/nitrogen dioxide, ozone and total reduced sulphur (as hydrogen sulphide) monitors approximately three times per year and on carbon monoxide monitors once per year.

Chemical analyses performed by the laboratory services branch are also subject to quality assurance and control.

The ambient air quality monitoring network undergoes constant maintenance to ensure a high standard of quality control.

Continuous real-time and particulate data are reviewed, assessed and validated constantly by regional staff and staff of the Environmental Monitoring and Reporting Branch.

Actions are taken immediately to correct anything that may affect the validity of the data.

These measures ensure that ambient air monitoring data are valid, complete, comparable, representative and accurate.

In 1999, continuous air monitoring instruments were given 716 performance audits. Approximately 80.2 per cent of the audits were found to be in the acceptable performance criterion , i.e. measured values were within 10 per cent of the standard For the remaining 19.8 per cent which fell outside the 10 per cent range, station log records and backup charts were consulted to adjust the data to reflect true ambient concentrations. As a result, the network for 1999 had 93.2 per cent valid data out of approximately 4 million data points.

**Data Base**

The ambient air quality data used in this report are stored in the ministry's air quality information system (AQUIS). Approximately 4 million air pollution measurements are added to AQUIS yearly, with the vast majority representing Ontario's more heavily populated urban areas.

A statistical pattern test is used to identify data anomalies, such as unusual pollutant concentrations. Each pollutant has a predetermined pollutant concentration range based on historical data. Values outside this range are flagged for further investigation.

AQUIS data are divided into two major groupings: continuous (1-hour) measurements and daily (24-hour) measurements.

Hourly data are obtained from automated ambient air monitoring instruments which operate continuously. These produce an average measurement each hour for a possible total of 8760 measurements in a year.

$SO_2$, SP (as COH), CO, $NO_x$/NO/$NO_2$, $O_3$, $PM_{10}$/$PM_{2.5}$ and TRS compounds are all measured hourly. A valid annual mean requires at least 5840 hourly readings or 67 per cent valid data. Typically the network yields approximately 95 per cent valid data.

The instruments which provide daily measurements from a 24-hour sampling period are usually operated on one, three or six-day sampling cycles. They measure TSP, $PM_{10}$, lead, various trace metals, sulphate and nitrate.

For daily data, a valid annual mean requires at least two thirds of the total number of possible samples, i.e., a station operating on a 6-day sampling schedule would require at least 40 out of a possible 61 samples.

To be included in the 10-year trend analysis, a site must have valid annual means for at least 8 out of the 10 years 1990-1999. To be included in long term analysis a site must have a valid annual for at least 24 out of the 29-years, 1971-1999.

## NETWORK DESCRIPTIVE TABLES AND ANNUAL STATISTICS

The entire continuous (hourly) network is summarized in Table 1 and Maps 2-9. The table gives station name, numerical identifier, and pollutants measured. The numerical identifier is the station (ID) number, the first digit of which identifies the geographic region in which the station is located.

The column headings for the continuous pollutants are as follows:

| | |
|---|---|
| $SO_2$ | (sulphur dioxide) |
| SP | (suspended particles as measured by COH) |
| TRS | (total reduced sulphur compounds) |
| CO | (carbon monoxide) |
| $NO_2$ | (nitrogen dioxide) |
| $NO_x$ | (oxides of nitrogen) |
| NO | (nitric oxide) |
| $O_3$ | (ozone) |
| $PM_{10}/PM_{2.5}$ | (real-time inhalable/respirable particles) |
| API | (air pollution index) |
| AQI | (air quality index) |

The particulate (daily) network is summarized in Table 2 and Map 10. The table gives station name, numerical identifier, and pollutants measured. Numerals indicate the monitoring cycle frequency in days. Some additional codes are defined in the key at the top of the table. The column headings for the noncontinuous pollutants are as follows:

| | |
|---|---|
| TSP | (total suspended particles) |
| Cu | (copper in TSP) |
| Cr | (chromium in TSP) |
| Fe | (iron in TSP) |
| Mn | (manganese in TSP) |
| Ni | (nickel in TSP) |
| Pb | (lead in TSP) |
| V | (vanadium in TSP) |
| $NO_3^-$ | (nitrate in TSP) |
| $SO_4^{2-}$ | (sulphate in TSP) |

The inhalable particle ($PM_{-10}$) network is summarized in Table 3 and Map 11. This table gives the station location, parameters measured and frequency of sampling.

The meteorological network is summarized in Table 4 and Map 12. This table gives station name, numerical identifier, meteorological parameters measured and the height of the measurements.

The 1999 statistical data for the various pollutants are provided in Tables 5 through 29. The 10-year trends are presented in Tables 30 to 37. The stations used in the 10-year trends are listed in Table 38.

## ABBREVIATIONS

| | |
|---|---|
| ID | - five digit provincial station identification number |
| TYP | - survey type |
| YR | - year monitoring began |
| LAT | - station latitude in degrees/minutes |
| LONG | - station longitude in degrees/minutes |
| ELEV | - elevation of sampling inlet (metres above ground) |
| INS | - insufficient data to compute relevant statistics |

## Table 1 ONTARIO CONTINUOUS AIR MONITORING NETWORK FOR 1999

T = TELEMETRY YR = YEAR STATION BEGAN ID = STATION IDENTIFICATION NUMBER ELEV = AIR INTAKE HEIGHT ABOVE GROUND
TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY LAT = LATITUDE(DEGREES:MINUTES) LONG = LONGITUDE(DEGREES:MINUTES)

| CITY | STATION NAME | ID | TYP | YR | LAT | LONG | ELEV (M) | S02 | COH | CO | O3 | NO2/NOX NO | PM10 | PM2.5 | TRS | API | AQI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WINDSOR | WRIGHT/WATER ST | 12007 | I | 84 | 42:17 | 83:06 | 4 | T | . | . | . | . | . | . | T | . | . |
| WINDSOR | 467 UNIVERSITY AV W | 12008 | A | 69 | 42:19 | 83:03 | 8 | T | T | T | T | T | . | . | . | T | T |
| WINDSOR | 9725 RIVERSIDE DR E | 12009 | I | 99 | 42:20 | 82:55 | 4 | T | . | . | . | T | . | T | . | . | . |
| WINDSOR | COLLEGE/SOUTH ST | 12016 | I | 75 | 42:18 | 83:04 | 4 | T | T | . | T | . | T | . | T | T | T |
| MERLIN | MOE WATER PUMP STN, MIDDLE RD | 13021 | A | 77 | 42:15 | 82:13 | 4 | . | . | . | T | . | . | . | . | . | . |
| COURTRIGHT | HWY40 (OPP LAMBTON GS) | 14016 | I | 69 | 42:48 | 82:29 | 4 | T | . | . | . | . | . | . | . | . | . |
| SARNIA | CENTENNIAL PK,FRONT ST/CN TRACKS | 14064 | A | 76 | 42:59 | 82:24 | 3 | T | T | T | T | T | T | . | T | T | T |
| MANDAUMIN | CONCESSION RD 26 | 14118 | A | 77 | 42:56 | 82:14 | 4 | . | . | . | T | . | . | . | . | . | . |
| LONGWOODS | LONGWOODS CONSERVATION AUTH. | 15009 | A | 83 | 42:53 | 81:29 | 4 | . | . | . | T | . | . | . | . | . | . |
| PARKHILL | PUC BUILDING | 15013 | A | 83 | 43:10 | 81:41 | 5 | . | . | . | T | T | . | . | . | . | . |
| GRAND BEND | POINT BLAKE (CONSERVATION AREA) | 15020 | A | 91 | 43:20 | 81:44 | 4 | . | . | . | T | . | . | . | . | . | . |
| LONDON | 900 HIGHBURY AVE. | 15025 | A | 95 | 42:61 | 81:13 | 4 | T | T | T | T | T | T | . | . | T | T |
| TIVERTON | CONCESSION RD 2 LOT A | 18007 | A | 79 | 44:18 | 81:35 | 4 | . | . | . | T | . | . | . | . | . | . |
| SIMCOE | EXPERIMENTAL FARM | 22071 | A | 75 | 42:51 | 80:16 | 4 | T | . | . | T | T | . | T | . | . | . |
| NANTICOKE | CHEAPSIDE RD(3 KM S OF HWY 3) | 22086 | I | 77 | 42:52 | 80:00 | 5 | T | . | . | . | T | . | . | | . | . |
| LONG POINT | PROVINCIAL PARK | 22901 | A | 79 | 42:35 | 80:23 | 4 | T | . | . | T | T | . | . | . | . | . |
| NANTICOKE | WALPOLE S PS, SANDUSK RD | 22904 | I | 79 | 42:50 | 80:02 | 4 | T | . | . | . | . | . | . | T | . | . |
| NANTICOKE | NANTICOKE VILLAGE | 22907 | I | 84 | 42:49 | 80:05 | 4 | T | T | . | . | . | . | . | T | . | . |
| KITCHENER | WEST AVE/HOMEWOOD | 26060 | A | 90 | 43:26 | 80:30 | 5 | T | T | T | T | T | . | T | . | T | T |
| ELMIRA | UNION/PARK | 26070 | I | 99 | 43:35 | 80:30 | 4 | T | . | . | . | . | . | . | T | . | . |
| ST CATHARINES | ARGYLE CRESCENT | 27067 | A | 87 | 43:10 | 79:14 | 4 | T | T | T | T | T | . | T | . | T | T |
| HAMILTON | ELGIN/KELLY | 29000 | A | 87 | 43:15 | 79:52 | 4 | T | T | T | T | T | . | T | T | T | T |
| HAMILTON | BARTON/SANFORD | 29025 | I | 69 | 43:16 | 79:51 | 4 | T | T | . | . | . | T | . | T | . | . |
| HAMILTON | 467 BEACH BLVD | 29102 | I | 84 | 43:17 | 79:47 | 4 | T | T | . | . | T | . | . | T | . | . |
| HAMILTON | VICKERS RD/EAST 18TH ST | 29114 | A | 85 | 43:14 | 79:52 | 3 | T | T | . | T | T | . | T | T | T | T |
| HAMILTON | MAIN ST/W HWY 403 | 29118 | A | 85 | 43:15 | 79:54 | 3 | T | T | T | T | T | . | . | T | T | T |
| HAMILTON | HILLYARD ST | 29531 | I | 96 | 43:29 | 79:55 | 3 | . | T | . | . | . | T | . | T | . | . |
| HAMILTON | PIER 25/BEACH STRIP | 29547 | I | 92 | 43:27 | 79:78 | 4 | . | T | . | . | . | . | . | T | . | . |
| TORONTO | CN TOWER | 31190 | A | 89 | 43:35 | 79:23 | 444 | . | . | . | T | T | . | . | . | . | . |
| TORONTO | BAY/WELLESLEY | 31103 | A | 97 | 43:39 | 79:23 | 3 | T | . | T | T | T | . | T | . | . | T |
| SCARBOROUGH | LAWRENCE/KENNEDY | 33003 | A | 70 | 43:45 | 79:16 | 4 | T | . | T | T | T | T | . | . | . | T |
| NORTH YORK | HENDON AVE (YONGE ST/FINCH AVE) | 34020 | A | 88 | 43:47 | 79:25 | 5 | T | . | T | T | T | . | T | . | . | T |
| ETOBICOKE | ELMCREST RD (CENTENNIAL PK) | 35003 | A | 69 | 43:39 | 79:35 | 5 | T | . | T | T | T | T | . | . | . | T |
| ETOBICOKE | EVANS/ARNOLD AV. | 35033 | I | 67 | 43:37 | 79:31 | 5 | T | T | T | T | T | T | T | . | T | T |
| YORK | CLEARVIEW HEIGHTS | 36030 | I | 88 | 43:42 | 79:29 | 5 | T | T | T | T | T | . | . | . | T | T |
| BURLINGTON | HWY2/NORTH SHORE BLVD E. | 44008 | A | 79 | 43:19 | 79:48 | 5 | T | . | T | T | T | T | . | . | . | T |
| OAKVILLE | BRONTE RD/WOBURN CRES. | 44015 | A | 80 | 43:24 | 79:44 | 5 | T | T | T | T | T | . | . | T | T | T |
| OSHAWA | PS, RITSON RD/OLIVE AV | 45025 | A | 79 | 43:53 | 78:51 | 5 | T | . | T | T | T | . | T | . | . | T |
| MISSISSAUGA | QUEENSWAY W/HURONTARIO ST. | 46110 | A | 77 | 43:34 | 79:37 | 5 | T | T | T | T | T | . | T | . | T | T |
| MISSISSAUGA | MEADOW PK, APPLE LANE C C | 46117 | I | 87 | 43:31 | 79:36 | 5 | T | . | . | . | . | . | . | T | . | . |

## Table 1 ONTARIO CONTINUOUS AIR MONITORING NETWORK FOR 1999

T = TELEMETRY YR = YEAR STATION BEGAN ID = STATION IDENTIFICATION NUMBER ELEV = AIR INTAKE HEIGHT ABOVE GROUND
TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY LAT = LATITUDE(DEGREES:MINUTES) LONG = LONGITUDE(DEGREES:MINUTES)

| CITY | STATION NAME | ID | TYP | YR | LAT | LONG | ELEV (M) | S02 | COH | CO | O3 | NO2/NOX NO | PM10 | PM2.5 | TRS | API | AQI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STOUFFVILLE | HWY47/E OF HWY48 | 48002 | A | 74 | 43:58 | 79:16 | 5 | . | . | . | T | T | T | . | . | . | . |
| DORSET | HWY 117/PAINT LAKE ROAD | 49010 | A | 81 | 45:13 | 78:56 | 3 | . | . | . | T | T | . | T | . | . | . |
| OTTAWA | MCD GDS, RIDEAU/WURTENBURG ST. | 51001 | A | 71 | 45:26 | 75:41 | 4 | T | T | T | T | T | . | T | . | T | T |
| KINGSTON | DALTON STREET | 52020 | A | 88 | 44:14 | 76:31 | 5 | . | T | . | T | . | T | . | . | . | T |
| CORNWALL | MEMORIAL PK, BEDFORD/THIRD STS. | 56051 | I | 70 | 45:01 | 74:44 | 4 | T | T | T | T | T | . | . | T | T | T |
| PETERBOROUGH | 10 HOSPITAL DRIVE | 59006 | A | 98 | 44:18 | 78:21 | 7 | T | . | T | T | T | T | . | . | . | . |
| DRYDEN | 35 VAN HORNE AV. | 61027 | I | 84 | 49:47 | 92:50 | 15 | . | . | . | . | . | . | . | T | . | . |
| FORT FRANCES | PORTAGE/CHURCH ST. | 62030 | I | 76 | 48:37 | 93:24 | 4 | . | . | . | . | . | . | . | T | . | . |
| FORT FRANCES | CEMETERY,COLONIZATION RD W | 62032 | I | 76 | 48:37 | 93:25 | 5 | . | . | . | . | . | . | . | T | . | . |
| INT'L FALLS | U.S. CUSTOMS BLDG | 62045 | I | 97 | 48:36 | 93:24 | 4 | T | . | . | . | . | . | . | T | . | . |
| FORT FRANCES | EIGHTH ST/CORNWALL AVE. | 62047 | I | 90 | 48:37 | 93:24 | 4 | . | . | . | . | . | . | . | T | . | . |
| FORT FRANCES | ROBERT MOORE P.S. ARMIT AV/4TH ST | 62200 | A | 97 | 48:38 | 9323 | 3 | | T | | T | | . | | T | . | T |
| MARATHON | PETER STREET | 63033 | I | 91 | 48:43 | 86:23 | 4 | . | . | . | . | . | . | . | T | . | . |
| THUNDER BAY | BOMBARDIER, MONTREAL ST. | 63046 | I | 76 | 48:21 | 89:18 | 3 | . | . | . | . | . | . | . | T | . | . |
| RED ROCK | RECREATION CTR, BROMPTON RD | 63084 | I | 81 | 48:57 | 88:15 | 7 | . | . | . | . | . | . | . | T | . | . |
| TERRACE BAY | ST MARTIN SCHOOL, SELKIRK ST | 63090 | I | 81 | 48:47 | 87:06 | 8 | . | . | . | . | . | . | . | T | . | . |
| TERRACE BAY | TERRACE HEIGHT DR | 63092 | I | 94 | 48.48 | 87:04 | 4 | . | . | . | . | . | . | . | T | . | . |
| THUNDER BAY | MOT 615 JAMES ST S | 63200 | A | 86 | 48:23 | 89:17 | 3 | T | T | T | T | T | . | . | T | T | T |
| SAULT STE MARIE | PUMPHOUSE, BONNEY ST | 71042 | I | 99 | 46:31 | 84:23 | 2 | . | . | . | . | . | . | T | . | . | . |
| SAULT STE MARIE | WM. MERRIFIELD SCHOOL, PATRICT ST | 71068 | A | 87 | 46:32 | 84:21 | 3 | T | T | . | T | T | T | | T | T | T |
| NORTH BAY | DEPT NATIONAL DEFENCE, CHIPPEWA ST | 75010 | A | 79 | 46:19 | 79:27 | 4 | . | T | . | T | . | . | . | . | . | T |
| SUDBURY | SKEAD | 77012 | I | 52 | 46:39 | 80:46 | 4 | T | . | . | . | . | . | . | . | . | . |
| SUDBURY | HANMER | 77013 | I | 73 | 46:39 | 80:57 | 5 | T | . | . | . | . | . | . | . | . | . |
| SUDBURY | WATER TANK ASH ST. | 77016 | I | 69 | 46:30 | 81:00 | 3 | T | . | . | . | . | . | . | . | . | . |
| CONISTON | GOVERNMENT ROAD/EDWARD ST. | 77028 | I | 74 | 46:29 | 80:51 | 4 | T | . | . | . | . | . | . | . | . | . |
| GARSON | FALCONBRIDGE ROAD | 77065 | I | 76 | 46:34 | 80:51 | 4 | T | . | . | . | . | . | . | . | . | . |
| NEW SUDBURY | KENNEDY STREET | 77075 | I | 76 | 46:31 | 80:57 | 4 | T | . | . | . | . | . | . | . | . | . |
| SUDBURY | LONG LAKE RD (VILLA LOYOLA) | 77096 | I | 80 | 46:24 | 81:01 | 4 | T | . | . | . | . | . | . | . | . | . |
| SUDBURY | MIKKOLA (J. HAMILTON SCHOOL) | 77201 | I | 82 | 46:25 | 81:07 | 4 | T | . | . | . | . | . | . | . | . | . |
| SUDBURY | SCIENCE NORTH | 77203 | A | 84 | 46:28 | 80:59 | 15 | T | T | T | T | T | . | . | T | T | T |
| RAYSIDE | ST LAURENT/REGIONAL RD. | 77206 | I | 85 | 46:36 | 81:06 | 4 | T | . | . | . | . | . | . | . | . | . |
| COPPER CLIFF | MARKET STREET | 77218 | I | 87 | 46:28 | 81:04 | 4 | T | . | . | . | . | . | . | . | . | . |
| SUDBURY | ROBINSON SCHOOL | 77225 | I | 90 | 46:28 | 81:00 | 4 | T | . | . | . | . | . | . | . | . | . |
| SUDBURY | DOZZI PARK | 77228 | I | 93 | 46:28 | 81:02 | 4 | T | . | . | . | . | . | . | . | . | . |
| | | **Source** | **39** | | | | | | | | | | | | | | |
| **TOTALS: 74 Air Monitoring Stations** | | **Ambient** | **35** | | | | | **50** | **26** | **22** | **39** | **33** | **13** | **14** | **30** | **18** | **27** |

**LEGEND:**

SO2 - Sulphur Dioxide
COH - Coefficient of Haze
CO - Carbon Monoxide
O3 - Ozone
NO2 - Nitrogen Dioxide
NO - Nitric Oxide
NOX - Oxides of Nitrogen
TRS - Total Reduced Sulphur
API - Air Pollution Index
AQI - Air Quality Index
PM10 - Inhalable Particulate
PM2.5 - Respirable Particulate

## Table 2 ONTARIO NONCONTINUOUS AIR MONITORING NETWORK FOR 1999

SINGLE DIGITS = CYCLE DURATION IN DAYS
ID = STATION IDENTIFICATION NUMBER
TYPE = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY
LAT =LATITUDE(DEGREES:MINUTES)
ELEV = AIR INTAKE HEIGHT ABOVE GROUND (METERS)
LONG = LONGITUDE(DEGREES:MINUTES)

| CITY | STATION NAME | ID | TYPE | YR | LAT | LONG | ELEV (M) | TSP | Cd | Cr | Cu | Fe | Mn | Ni | Pb | V | NO3 | SO4 | RAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ST. MARYS | 309 THOMAS ST. | 11001 | I | 79 | 43:15 | 81:09 | 3 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| WINDSOR | WRIGHT/WATER ST | 12007 | I | 84 | 42:17 | 83:06 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . |
| WINDSOR | 467 UNIVERSITY AV W | 12008 | A | 70 | 42:19 | 83:03 | 8 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| WINDSOR | DROUILLARD RD/RICHMOND ST | 12011 | I | 88 | 42:19 | 83:00 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | . |
| WINDSOR | FILTRAT PLT,3665 WYANDOTTE ST E | 12013 | I | 71 | 42:19 | 83:00 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | . |
| WINDSOR | COLLEGE/SOUTH ST | 12016 | A | 75 | 42:18 | 83:04 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . |
| WINDSOR | 2885 HOWARD AVE | 12038 | I | 78 | 42:17 | 83:01 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . |
| WINDSOR | COLUMBUS CENTRE | 12058 | I | 93 | 42:17 | 83:01 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . |
| WINDSOR | CITY YARD | 12061 | I | 95 | 42:18 | 83:02 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | . |
| COURTRIGHT | HWY40 (OPP LAMBTON GS) | 14016 | I | 69 | 42:48 | 82:29 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| CORUNNA | R.R. #1 (W OF HOUSE) | 14030 | I | 78 | 42:53 | 82:17 | 1 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | . |
| LONDON | 900 HIGHBURY AVE | 15025 | A | 96 | 42:61 | 81:16 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | 6 |
| BEACHVILLE | CYANAMIDE RD (GORDON PROP) | 17014 | I | 74 | 43:05 | 80:50 | 2 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| BEACHVILLE | 26 VINE ST (MOE TRAILER) | 17015 | I | 89 | 43:05 | 80:50 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| BEACHVILLE | HWY 2 RR 2 (J SPRIEL PROP) | 17020 | I | 81 | 43:04 | 81:49 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| BEACHVILLE | OXFORD CTY RD 6 (HESSTON FARM) | 17021 | I | 83 | 43:06 | 81:58 | 1 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| BEACHVILLE | 26 VINE ST (MOE TRAILER) | 17215 | I | 89 | 43:04 | 80:50 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| BEACHVILLE | 26 VINE ST (MOE TRAILER) | 17315 | I | 89 | 43:04 | 80:50 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| NANTICOKE | WALPOLE S PS, SANDUSK RD | 22904 | I | 84 | 42:50 | 80:02 | 4 | 6 | . | . | . | . | . | . | . | . | 6 | 6 | . |
| NANTICOKE | RAINHAM RD (NEAR STELCO GATE) | 22907 | I | 84 | 42:49 | 80:05 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| NANTICOKE | N 2 KM NANTICOKE GS | 22964 | I | 84 | 42:50 | 80:05 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| ELMIRA | MILL ST | 26054 | I | 98 | 43:35 | 80:33 | 3 | 6 | 6 | 6 | . | 6 | 6 | 6 | 6 | 6 | . | . | |
| ELMIRA | CHURCH/DUKE | 26056 | I | 98 | 43:35 | 80:33 | 5 | 6 | 6 | 6 | . | 6 | 6 | 6 | 6 | 6 | . | . | |
| CAMBRIDGE | SCOTT RD/CLEMENS AVE | 26062 | I | 99 | 43:25 | 80:19 | 1.5 | 6 | 6 | 6 | . | 6 | 6 | 6 | 6 | 6 | . | . | |
| CAMBRIDGE | SHEFFIELD ST | 26064 | I | 99 | 43:25 | 80:18 | 10 | 6 | 6 | 6 | . | 6 | 6 | 6 | 6 | 6 | . | . | |
| WELLAND | 337 ALBERTA/DEVON ST | 27045 | I | 78 | 42:58 | 79:15 | 1 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| THOROLD | 185 QUEEN ST S | 27052 | I | 82 | 43:07 | 79:12 | 1 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | . |
| ST CATHARINES | 27 PLYMOUTH AVE | 27057 | I | 98 | 43:06 | 79:05 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | . |
| THOROLD | BEAVERDAMS/COLLIER ST | 27081 | I | 99 | 43:06 | 79:12 | 1.5 | 6 | 6 | 6 | . | 6 | 6 | 6 | 6 | 6 | . | . | |
| NIAGARA FALLS | 7401 PORTAGE RD | 27082 | I | 99 | 43:04 | 79:04 | 1.5 | 6 | 6 | 6 | . | 6 | 6 | 6 | 6 | 6 | . | . | |
| HAMILTON | ELGIN/KELLY | 29000 | A | 88 | 43:15 | 79:52 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| HAMILTON | KENILWORTH | 29009 | I | 69 | 43:15 | 79:49 | 6 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| HAMILTON | BURLINGTON/LEEDS | 29011 | I | 73 | 43:16 | 79:49 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . |
| HAMILTON | BURLINGTON/WELLINGTON | 29012 | A | 73 | 43:16 | 79:59 | 7 | 6 | . | . | . | . | . | . | . | . | . | . | . |

## Table 2 ONTARIO NONCONTINUOUS AIR MONITORING NETWORK FOR 1999

SINGLE DIGITS = CYCLE DURATION IN DAYS
TYPE = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY
ELEV = AIR INTAKE HEIGHT ABOVE GROUND (METERS)
ID = STATION IDENTIFICATION NUMBER
LAT =LATITUDE(DEGREES:MINUTES)
LONG = LONGITUDE(DEGREES:MINUTES)

| CITY | STATION NAME | ID | TYPE | YR | LAT | LONG | ELEV (M) | TSP | Cd | Cr | Cu | Fe | Mn | Ni | Pb | V | NO3 | SO4 | RAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HAMILTON | BARTON/SANFORD | 29025 | I | 69 | 43:16 | 79:51 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . |
| HAMILTON | 467 BEACH BLVD | 29102 | I | 85 | 43:17 | 79:47 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . |
| HAMILTON | GERTRUDE/DEPEW | 29113 | I | 86 | 43:15 | 79:49 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| HAMILTON | VICKERS RD/EAST 18TH ST | 29114 | A | 85 | 43:14 | 79:52 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . |
| HAMILTON | MAIN ST/W HWY 403 | 29118 | A | 85 | 43:15 | 79:54 | 3 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| HAMILTON | DUNDURN/YORK | 29122 | I | 87 | 43:16 | 79:53 | 10 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| HAMILTON | KEEFER COURT/MOEE LAB | 29143 | I | 92 | 43:24 | 79:76 | 4 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| TORONTO | BRUCE PS, 51 LARCHMOUNT AV | 31045 | I | 86 | 43:40 | 79:20 | 6 | 1 | . | . | . | . | . | . | 1 | . | . | . | . |
| TORONTO | A.R.CLARKE CO. 633 EASTERN AVE. | 31065 | I | 87 | 43:40 | 79:20 | 12 | 1 | . | . | . | . | . | . | 1 | . | . | . | . |
| TORONTO | WORKS DEPT, 138 HAMILTON AV | 31082 | I | 74 | 43:40 | 79:21 | 5 | 1 | . | . | . | . | . | . | 1 | . | . | . | . |
| BURLINGTON | 3900 MAINWAY BLVD | 44009 | I | 99 | 43:21 | 79:48 | 4 | 6 | | . | . | 6 | . | . | . | . | . | . | |
| MISSISSAUGA | 2360 DIXIE RD | 46047 | I | 95 | 43:36 | 79:35 | 1 | 6 | . | . | . | . | . | . | 6 | . | . | . | . |
| MISSISSAUGA | MEADOW PARK, APPLE LANE C C | 46117 | I | 87 | 43:31 | 79:36 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | . |
| MARKHAM | 2800 JOHN ST (AT WOODBINE) | 48003 | I | 99 | 43:49 | 79:21 | 4 | 6 | | . | . | . | . | . | . | . | . | . | |
| THUNDER BAY | BOMBARDIER, MONTREAL ST | 63046 | I | 78 | 48:21 | 89:18 | 3 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| SAULT STE MARIE | PUMPHOUSE, BONNEY ST | 71042 | I | 75 | 46:31 | 84:23 | 2 | 6 | . | 6 | 6 | 6 | 6 | 6 | 6 | 6 | . | . | . |
| HEARST | GEORGE ST/6TH ST | 72114 | I | 90 | 49:41 | 83:39 | 2 | 6 | . | . | . | . | . | . | . | . | . | . | . |
| TOTALS: | | | | | | | | 51 | 24 | 25 | 19 | 26 | 25 | 24 | 29 | 25 | 11 | 11 | 4 |

**LEGEND:**

| | | | |
|---|---|---|---|
| TSP - Total Suspended Particulate | Fe - Iron | V - Vanadium | Sb - Antimony |
| Cd - Cadmium | Mn - Manganese | N03 - Nitrate | C - Carbon |
| Cr - Chromium | Ni - Nickel | SO4 - Sulphate | RAD - Radiation |
| Cu - Copper | Pb - Lead | Cl - Chlorine | |

## Table 3 ONTARIO AIR MONITORING NETWORK FOR $PM_{10}$ 24-HOUR SAMPLING FOR 1999

ID - STATION ID YR - YEAR MONITORING BEGAN LAT - LATITUDE (DEGREES:MINUTES) LONG - LONGITUGE (DEGREES:MINUTES)
ELEV - AIR INTAKE HEIGHT ABOVE GROUND (METERS) TYPE - A IS AMBIENT SURVEY ; I IS SOURCE SPECIFIC SURVEY

| CITY | STATION NAME | ID | YR | TYPE | LAT | LONG | ELEV (M) | IP | Cu | Fe | Mn | Pb | Cr | Cd | V | Ni | SO4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WINDSOR | WRIGHT/WATER STREET | 12507 | 90 | A | 42:17 | 82:16 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| WINDSOR | 467 UNIVERSITY AVE WEST | 12508 | 89 | A | 42:19 | 83:02 | 8 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| WINDSOR | 3665 WYANDOTTE ST. E. | 12513 | 92 | A | 42:19 | 83:00 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| WINDSOR | ST GABRIEL S.S., 1400 ROSELAWN DRIVE | 12556 | 98 | A | 42:15 | 83:01 | 10 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| WINDSOR | ST ALEXANDER S.S., 5305 ADSTOLL AVE | 12559 | 98 | A | 42:18 | 82:57 | 10 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| WINDSOR | ST GREGORY'S S.S., 13765 ST. GREGORY'S RD | 12583 | 98 | A | 42:19 | 82:51 | 10 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| SARNIA | 6TH LINE, MOORE TOWNSHIP | 14550 | 97 | I | 42:58 | 82:24 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| SARNIA | CENTENNIAL PK/FRONT ST | 14564 | 97 | A | 42:59 | 82:24 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| LONDON | 900 HIGHBURY AVE. | 15525 | 96 | A | 42:61 | 81:16 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| BEACHVILLE | EARL LANTZ PROPERTY | 17550 | 98 | I | 43:06 | 80:52 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| NANTICOKE | WALPOLE S P.S., SANDUSK RD | 22304 | 92 | I | 42:50 | 80:02 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| ELMIRA | MILL STREET | 26365 | 98 | I | 43:35 | 80:33 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| ST CATHARINES | KING ST | 27308 | 91 | I | 43:10 | 79:15 | 12 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| THOROLD | 185 QUEEN ST. SOUTH | 27352 | 90 | I | 43:07 | 79:12 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| HAMILTON | ELGIN\KELLY STREET | 29300 | 90 | A | 43:15 | 79:52 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| HAMILTON | BEACH BLVD | 29302 | 89 | I | 43:17 | 79:47 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| HAMILTON | GERTRUDE/DEPEW STREET | 29313 | 90 | I | 43:15 | 79:49 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| HAMILTON | BUCHANAN PARK P.S. | 29324 | 92 | I | 43:14 | 79:53 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| TORONTO | BAY/WELLESLEY | 31127 | 89 | A | 43:39 | 79:23 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| ETOBICOKE | EVANS AVE/ARNOLD CRES | 35127 | 97 | A | 43:37 | 79:31 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| OAKVILLE | BRONTE RD/WOBURN CRES. | 44127 | 92 | I | 43:24 | 79:44 | 1 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MISSISSAUGA | MEADOW PK, APPLE LANE C C | 46127 | 93 | I | 43:31 | 79:36 | 1 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| FORT FRANCES | 250 CHURCH STREET | 62135 | 92 | I | 48:36 | 93:23 | 9 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| THUNDER BAY | 615 JAMES ST. SOUTH | 63201 | 89 | A | 48:23 | 89:17 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| SAULT STE MARIE | PUMPHOUSE,BONNEY STREET | 71342 | 89 | I | 46:31 | 84:23 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| SAULT STE MARIE | W. M. MERRIFIELD SCHOOL | 71368 | 90 | A | 46:32 | 84:21 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| COPPER CLIFF | MARKET STREET | 77570 | 96 | I | 46:28 | 81:04 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | | | Ambient: | 13 | | | TOTAL | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |

Notes: Samplers operate on a 6-day sampling cycle

LEGEND: IP - Inhalable Particulate Cr - Chromium SO4 - Sulphate Ni - Nickel Pb - Lead
Cu - Copper Cd - Cadmium Mn - Manganese V - Vandium Fe - Iron

**Table 4 ONTARIO METEOROLOGICAL NETWORK FOR 1999**

ID - STATION ID NUMBER YR - YEAR MONITORING BEGAN
T - TELEMETRY LAT - LATITUDE(DEGREES:MINUTI LONG - LONGITUDE(DEGREES:MINUTES)

| CITY | STATION NAME | ID | YR | LAT | LONG | WS1/WD1 | HT1 | WS2/WD2 | HT2 | WS3/WD3 | HT3 | TEM | DT1 | DT2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Windsor | Wright/Water St. | 12007 | 84 | 42:17 | 82:16 | T | 10 | T | 40 | . | . | T | T | . |
| Windsor | 9725 Riverside Drive E. | 12009 | 99 | 42:20 | 82:55 | T | 15 | | | | | | | |
| Merlin | MOE Water Pump Stn, Middle Rd. | 13021 | 77 | 42:15 | 82:13 | T | 9 | . | . | . | . | . | . | . |
| Courtright | Hwy 40 (OPP Lambton GS) | 14016 | 75 | 42:48 | 82:29 | T | 10 | T | 30 | T | 90 | T | T | T |
| Parkhill | Puc Building | 15013 | 83 | 43:10 | 81:41 | T | 10 | . | . | . | . | . | . | . |
| Tiverton | Bruce GS Weather Station | 18017 | 79 | 44:18 | 81:35 | T | 10 | T | 30 | . | . | T | . | . |
| Jarvis | Hydro Met Tower (2Km Ne Jarvis) | 22883 | 84 | 42:54 | 80:05 | T | 10 | . | . | T | 80 | T | . | . |
| Long Point | Provincial Park | 22901 | 79 | 42:35 | 80:23 | T | 10 | . | . | T | 80 | T | . | . |
| Nanticoke | Rainham Road (Near Stelco Gate) | 22907 | 89 | 42:48 | 80:04 | T | 10 | . | . | . | . | . | . | . |
| Cambridge | Clyde Road | 26066 | 91 | 43:38 | 80:29 | . | . | T | 30 | . | . | T | . | . |
| Elmira | Union/Park | 26070 | 99 | 43:35 | 80:30 | T | 6 | | | | | | | |
| Allanburg | Transformer Station Highway 58 | 27011 | 81 | 43:04 | 79:11 | T | 10 | T | 37 | . | . | T | T | . |
| Hamilton | N. Brampton/Woodward | 29026 | 75 | 43:15 | 79:46 | T | 10 | T | 30 | T | 91 | T | . | . |
| Flamborough | Moxley/Hwy5 | 29177 | 96 | 43:17 | 79:59 | T | 12 | . | . | . | . | . | . | . |
| Hamilton | Hillyard St | 29531 | 96 | 43:29 | 79:55 | T | 7 | . | . | . | . | . | . | . |
| Toronto | Bruce Ps, 51 Larchmount Avenue | 31045 | 75 | 43:39 | 79:25 | T | 21 | . | . | . | . | . | . | . |
| Toronto | Perth/Ruskin (Junction Triangle) | 31120 | 82 | 43:40 | 79:27 | T | 18 | . | . | . | . | . | . | . |
| Scarborough | Lawrence/Kennedy Ave. | 33003 | 75 | 43:45 | 79:16 | T | 12 | T | 76 | . | . | T | . | . |
| Etobicoke | Evans/Arnold Avenue | 35033 | 75 | 43:37 | 79:31 | T | 10 | T | 30 | T | 91 | T | T | T |
| York | Clearview Heights | 36030 | 99 | 43:42 | 79:29 | T | 10 | . | . | . | . | . | . | . |
| Burlington | HWY 2/ North Shore Blvd. | 44008 | 79 | 43.19 | 79:48 | T | 10 | . | . | . | . | . | . | . |
| Oakville | Bronte Road/Woburn Crescent | 44015 | 80 | 43:24 | 79:44 | T | 10 | . | . | . | . | . | . | . |
| Stouffville | Highway 47 East Of Highway 48 | 48002 | 82 | 43:58 | 79:16 | T | 10 | . | . | . | . | T | . | . |
| Kingston | 133 Dalton Street | 52020 | 93 | 44:15 | 76:31 | T | 10 | . | . | . | . | . | . | . |
| Cornwall | Memorial Park | 56051 | 85 | 45:01 | 74:44 | T | 10 | . | . | . | . | . | . | . |
| Peterborough | 10 Hospital Drive | 59006 | 99 | 44:18 | 78:21 | T | 10 | . | . | . | . | . | . | . |
| Dryden | 35 Van Horne Avenue | 61027 | 84 | 49:47 | 92:50 | T | 18 | . | . | . | . | T | . | . |
| Fort Frances | Eighth Street/Cornwall Avenue | 62047 | 90 | 48:37 | 93:25 | T | 10 | . | . | . | . | T | . | . |
| Marathon | Peter Street | 63033 | 91 | 48:43 | 86:23 | T | 8 | . | . | . | . | . | . | . |
| Terrace Bay | St Martin School, Selkirk St | 63090 | 82 | 48:47 | 87:05 | T | 12 | . | . | . | . | T | . | . |
| Thunder Bay | MOT 615 James Street South | 63200 | 90 | 48:22 | 89:17 | T | 10 | . | . | . | . | . | . | . |
| Sault Ste Marie | Wm. Merrifield School | 71068 | 87 | 46:32 | 84:21 | T | 10 | . | . | . | . | T | . | . |
| Hearst | MNR, 613 Front St | 72113 | 95 | 49:41 | 83:39 | T | 16 | . | . | . | . | . | . | . |
| North Bay | Chippewa St | 75010 | 87 | 46:19 | 79:27 | T | 10 | . | . | . | . | T | . | . |
| Sudbury | Hanmer | 77013 | 82 | 46:39 | 80:57 | T | 10 | . | . | . | . | T | . | . |
| Sudbury | CKNC-TV, 699 Frood Road | 77025 | 73 | 46:30 | 81:00 | T | 10 | . | . | T | 100 | T | . | T |
| Sudbury | Robinson School | 77225 | 99 | 46:46 | 81:09 | . | . | . | . | . | . | T | . | . |

**LEGEND:**

WS1/WD1 - WIND SPEED AND DIRECTION BELOW 23 M
WS2/WD2 - WIND SPEED AND DIRECTION 23 M TO 76 M
WS3/WD3 - WIND SPEED AND DIRECTION ABOVE 76 M
HT1 - SENSOR HEIGHT (METERS) LEVEL 1
HT2 - SENSOR HEIGHT (METERS) LEVEL 2
HT3 - SENSOR HEIGHT (METERS) LEVEL 3
TEM - AMBIENT TEMPERATURE
DT1 - TEMPERATURE DIFFERENCE LEVEL 2 MINUS 1
DT2 - TEMPERATURE DIFFERENCE LEVEL 3 MINUS 1

## Table 5 Sulphur Dioxide ($SO_2$) Statistics (1999)

**Unit: parts per billion (ppb)**

**$SO_2$ 1-hour AAQC is 250 ppb**

**$SO_2$ 24-hour AAQC is 100 ppb**

**$SO_2$ 1-year AAQC is 20 ppb**

| | | | | PERCENTILES | | | | | | | | Maximum | | # of times above Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10% | 30% | 50% | 70% | 90% | 99% | Mean | 1h | 24h | 1h | 24h | 1y |
| 12007 | Windsor | Wright/Water St | 8016 | 1 | 2 | 4 | 6 | 12 | 24 | 5.4 | 58 | 21.0 | 0 | 0 | 0 |
| 12008 | Windsor | 467 University Av W | 8517 | 1 | 2 | 4 | 7 | 15 | 41 | 6.7 | 91 | 37.5 | 0 | 0 | 0 |
| 12009 | Windsor | 9725 Riverside Dr E | 6863 | 0 | 1 | 2 | 4 | 10 | 26 | 4.0 | 68 | 14.7 | 0 | 0 | 0 |
| 12016 | Windsor | College/South St | 8347 | 1 | 3 | 7 | 11 | 21 | 51 | 9.6 | 138 | 41.8 | 0 | 0 | 0 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 8055 | 2 | 4 | 6 | 8 | 15 | 58 | 8.4 | 182 | 69.6 | 0 | 0 | 0 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 8736 | 2 | 3 | 4 | 7 | 29 | 118 | 11.8 | 188 | 95.8 | 0 | 0 | 0 |
| 15025 | London | 900 Hightbury Ave. | 8427 | 0 | 2 | 3 | 6 | 10 | 29 | 4.9 | 109 | 28.6 | 0 | 0 | 0 |
| 22071 | Simcoe | Experimental Farm | 8381 | 0 | 1 | 2 | 4 | 9 | 21 | 3.7 | 67 | 15.0 | 0 | 0 | 0 |
| 22086 | Nanticoke | Cheapside Rd(3 Km S of Hwy 3) | 8570 | 0 | 1 | 2 | 5 | 11 | 32 | 4.6 | 191 | 21.3 | 0 | 0 | 0 |
| 22901 | Long Point | Provincial Park | 8513 | 1 | 2 | 3 | 4 | 8 | 17 | 3.7 | 77 | 15.8 | 0 | 0 | 0 |
| 22904 | Nanticoke | Walpole S Ps Sandusk Rd | 8630 | 0 | 2 | 3 | 5 | 12 | 32 | 5.2 | 184 | 28.3 | 0 | 0 | 0 |
| 22907 | Nanticoke | Rainham Rd (Near Stelco Gate) | 8044 | 2 | 3 | 4 | 7 | 16 | 46 | 7.2 | 104 | 59.7 | 0 | 0 | 0 |
| 26060 | Kitchener | West Ave/Homewood | 8570 | 1 | 1 | 2 | 4 | 8 | 16 | 3.4 | 36 | 16.8 | 0 | 0 | 0 |
| 26070 | Elmira | Union/Park | 3554 | 0 | 1 | 1 | 2 | 6 | 35 | INS | 94 | 14.0 | 0 | 0 | 0 |
| 27067 | St Catharines | Argyle Cres (Pump Stn) | 8048 | 0 | 0 | 1 | 3 | 6 | 13 | 2.2 | 31 | 9.2 | 0 | 0 | 0 |
| 29000 | Hamilton | Elgin/Kelly St | 8538 | 1 | 2 | 4 | 7 | 15 | 39 | 6.6 | 80 | 23.3 | 0 | 0 | 0 |
| 29025 | Hamilton | Barton/Sanford | 8497 | 0 | 2 | 4 | 7 | 19 | 47 | 7.1 | 90 | 33.1 | 0 | 0 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 8335 | 0 | 1 | 3 | 8 | 27 | 69 | 9.1 | 155 | 49.6 | 0 | 0 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 8433 | 1 | 2 | 3 | 6 | 14 | 31 | 5.5 | 73 | 26.0 | 0 | 0 | 0 |
| 29118 | Hamilton | Main St W/Hwy403 | 8616 | 0 | 1 | 3 | 5 | 11 | 25 | 4.5 | 58 | 16.0 | 0 | 0 | 0 |
| 31103 | Toronto | Bay/Wellesley | 1611 | 2 | 3 | 4 | 6 | 10 | 21 | INS | 70 | 14.6 | 0 | 0 | 0 |
| 33003 | Scarborough | Lawrence/Kennedy | 8712 | 2 | 3 | 4 | 5 | 9 | 20 | 4.9 | 46 | 19.1 | 0 | 0 | 0 |
| 34020 | North York | Hendon Ave (Yonge/Finch) | 8715 | 2 | 3 | 4 | 5 | 9 | 24 | 5.0 | 57 | 21.3 | 0 | 0 | 0 |
| 35003 | Etobicoke | Elmcrest Rd (Centennial Pk) | 5676 | 1 | 1 | 2 | 4 | 9 | 23 | INS | 217 | 25.5 | 0 | 0 | 0 |
| 35033 | Etobicoke | Evans/Arnold Av | 6289 | 3 | 5 | 6 | 8 | 11 | 23 | 6.9 | 63 | 24.8 | 0 | 0 | 0 |
| 36030 | York | Clearview Ht. GS/Keele St | 7129 | 1 | 3 | 4 | 5 | 9 | 24 | 4.9 | 91 | 20.5 | 0 | 0 | 0 |
| 44008 | Burlington | Hwy2/North Shore Blvd E | 7256 | 1 | 3 | 4 | 6 | 9 | 22 | 4.9 | 132 | 22.5 | 0 | 0 | 0 |
| 44015 | Oakville | Bronte Rd/Woburn Cres | 6946 | 0 | 2 | 3 | 5 | 9 | 19 | 4.0 | 81 | 21.4 | 0 | 0 | 0 |
| 45025 | Oshawa | Ps Ritson Rd/Olive Av | 8733 | 2 | 3 | 4 | 5 | 10 | 20 | 5.1 | 39 | 16.4 | 0 | 0 | 0 |
| 46110 | Mississauga | Queensway W/Hurontario St | 8701 | 2 | 2 | 3 | 5 | 9 | 25 | 4.7 | 133 | 18.3 | 0 | 0 | 0 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 7867 | 1 | 2 | 3 | 4 | 8 | 19 | 3.8 | 54 | 16.4 | 0 | 0 | 0 |

## Table 5 Sulphur Dioxide ($SO_2$) Statistics (1999)

**Unit: parts per billion (ppb)**

**$SO_2$ 1-hour AAQC is 250 ppb**

**$SO_2$ 24-hour AAQC is 100 ppb**

**$SO_2$ 1-year AAQC is 20 ppb**

| | | | | PERCENTILES | | | | | | | Maximum | | # of times above Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10% | 30% | 50% | 70% | 90% | 99% | Mean | 1h | 24h | 1h | 24h | 1y |
| 51001 | Ottawa | Mcd Gds, Rideau/Wurtemburg St | 8607 | 1 | 3 | 4 | 5 | 8 | 11 | 4.2 | 22 | 10.0 | 0 | 0 | 0 |
| 56051 | Cornwall | Memorial Pk Bedford/Third | 8149 | 1 | 2 | 3 | 4 | 8 | 26 | 3.9 | 86 | 20.8 | 0 | 0 | 0 |
| 59006 | Peterborough | 10 Hospital Drive | 8099 | 0 | 0 | 1 | 2 | 4 | 11 | 1.7 | 26 | 10.3 | 0 | 0 | 0 |
| 62045 | Int'l Falls | US Customs Bldg | 7905 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 | 16 | 1.3 | 0 | 0 | 0 |
| 63200 | Thunder Bay | MTC 615 James St S | 8455 | 0 | 0 | 0 | 0 | 1 | 7 | 0.4 | 31 | 4.7 | 0 | 0 | 0 |
| 71068 | Sault Ste Marie | Wm. Merrifield School | 8210 | 0 | 0 | 0 | 1 | 4 | 29 | 1.9 | 113 | 25.8 | 0 | 0 | 0 |
| 77012 | Sudbury | Skead | 8742 | 0 | 0 | 1 | 2 | 10 | 86 | 5.3 | 575 | 59.7 | 5 | 0 | 0 |
| 77013 | Sudbury | Hanmer | 8625 | 0 | 0 | 1 | 2 | 6 | 58 | 3.9 | 424 | 66.0 | 4 | 0 | 0 |
| 77016 | Sudbury | Water Tank Ash St | 8650 | 0 | 1 | 1 | 3 | 12 | 77 | 5.7 | 376 | 39.8 | 3 | 0 | 0 |
| 77028 | Coniston | Government Rd/Edward St | 8322 | 0 | 0 | 1 | 1 | 5 | 53 | 3.0 | 339 | 32.5 | 1 | 0 | 0 |
| 77065 | Garson | Falconbridge Rd | 8722 | 0 | 0 | 1 | 2 | 6 | 71 | 4.0 | 342 | 37.6 | 3 | 0 | 0 |
| 77075 | New Sudbury | Kennedy St | 8747 | 0 | 1 | 1 | 2 | 9 | 81 | 5.2 | 461 | 51.1 | 5 | 0 | 0 |
| 77096 | Sudbury | Long Lake Rd (Villa Loyola) | 4110 | 0 | 0 | 1 | 2 | 8 | 88 | INS | 593 | 68.5 | 6 | 0 | 0 |
| 77201 | Sudbury | Mikkola (J. Hamilton School) | 8745 | 0 | 0 | 1 | 1 | 4 | 80 | 3.7 | 399 | 51.3 | 9 | 0 | 0 |
| 77203 | Sudbury | Science North | 8725 | 0 | 0 | 1 | 2 | 6 | 42 | 3.0 | 281 | 24.6 | 1 | 0 | 0 |
| 77206 | Rayside | St Laurent/Regional Rd | 8614 | 0 | 0 | 0 | 1 | 4 | 33 | 2.1 | 263 | 36.5 | 1 | 0 | 0 |
| 77218 | Copper Cliff | Market Street | 8536 | 0 | 0 | 1 | 3 | 14 | 105 | 6.4 | 612 | 67.4 | 7 | 0 | 0 |
| 77225 | Sudbury | Robinson School | 8731 | 0 | 0 | 1 | 2 | 7 | 61 | 4.0 | 400 | 45.4 | 9 | 0 | 0 |
| 77228 | Sudbury | Mary/Glover St | 8604 | 0 | 0 | 1 | 3 | 7 | 48 | 3.8 | 325 | 54.4 | 4 | 0 | 0 |

## Table 6 Suspended Particles (SP) Statistics (1999)

**Unit: COHS/1000 FT**
**COH 24-hour AAQC is 1.0 COH unit**
**COH 1-year AAQC is 0.5 COH unit**

| | | | | PERCENTILES | | | | | | | Maximum | | # of times above Criteria | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn | City | Location | Valid h | 10% | 30% | 50% | 70% | 90% | 99% | Mean | 1h | 24h | 24h | 1y |
| 12008 | Windsor | 467 University Av W | 8294 | 0.0 | 0.1 | 0.2 | 0.2 | 0.4 | 0.8 | 0.19 | 1.9 | 0.55 | 0 | 0 |
| 12016 | Windsor | College/South St | 7798 | 0.1 | 0.1 | 0.2 | 0.3 | 0.5 | 1.1 | 0.24 | 3.6 | 1.17 | 1 | 0 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 8709 | 0.0 | 0.1 | 0.1 | 0.2 | 0.4 | 0.8 | 0.18 | 1.8 | 0.75 | 0 | 0 |
| 15025 | London | 900 Hightbury Ave. | 8504 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.6 | 0.14 | 1.9 | 0.78 | 0 | 0 |
| 22907 | Nanticoke | Rainham Rd (Near Stelco Gate) | 8637 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.6 | 0.16 | 3.5 | 0.54 | 0 | 0 |
| 26060 | Kitchener | West Ave/Homewood | 8710 | 0.0 | 0.1 | 0.1 | 0.2 | 0.4 | 0.8 | 0.17 | 2.7 | 0.74 | 0 | 0 |
| 27067 | St Catharines | Argyle Cres (Pump Stn) | 8395 | 0.0 | 0.1 | 0.2 | 0.2 | 0.4 | 0.9 | 0.20 | 2.6 | 0.68 | 0 | 0 |
| 29000 | Hamilton | Elgin/Kelly St | 8414 | 0.1 | 0.1 | 0.2 | 0.3 | 0.5 | 1.0 | 0.25 | 2.1 | 0.83 | 0 | 0 |
| 29025 | Hamilton | Barton/Sanford | 7611 | 0.1 | 0.2 | 0.2 | 0.3 | 0.6 | 1.2 | 0.30 | 4.8 | 0.93 | 0 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 7871 | 0.1 | 0.2 | 0.3 | 0.4 | 0.7 | 1.2 | 0.34 | 2.8 | 1.06 | 1 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 8666 | 0.0 | 0.1 | 0.1 | 0.2 | 0.4 | 0.9 | 0.19 | 1.8 | 0.75 | 0 | 0 |
| 29118 | Hamilton | Main St W/Hwy403 | 8584 | 0.0 | 0.1 | 0.2 | 0.3 | 0.6 | 1.1 | 0.25 | 1.8 | 0.95 | 0 | 0 |
| 29531 | Hamilton | Hillyard St | 8283 | 0.1 | 0.3 | 0.4 | 0.6 | 1.1 | 2.7 | 0.54 | 5.0 | 2.28 | 21 | 1 |
| 29547 | Hamilton | Pier 25 | 7928 | 0.1 | 0.2 | 0.3 | 0.4 | 0.7 | 1.2 | 0.34 | 3.1 | 1.12 | 1 | 0 |
| 35033 | Etobicoke | Evans/Arnold Av | 6492 | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 1.3 | 0.33 | 3.6 | 1.20 | 1 | 0 |
| 36030 | York | Clearview Ht. GS/Keele St | 6696 | 0.1 | 0.1 | 0.2 | 0.3 | 0.5 | 1.2 | 0.26 | 2.4 | 0.94 | 0 | 0 |
| 44015 | Oakville | Bronte Rd/Woburn Cres | 6958 | 0.0 | 0.1 | 0.2 | 0.3 | 0.5 | 0.9 | 0.22 | 2.5 | 0.84 | 0 | 0 |
| 46110 | Mississauga | Queensway W/Hurontario St | 8288 | 0.1 | 0.1 | 0.2 | 0.3 | 0.6 | 1.5 | 0.30 | 4.3 | 1.13 | 2 | 0 |
| 51001 | Ottawa | Mcd Gds, Rideau/Wurtemburg St | 2614 | 0.0 | 0.1 | 0.1 | 0.2 | 0.4 | 0.9 | 0.18 | 1.6 | 0.80 | 0 | 0 |
| 52020 | Kingston | 133 Dalton Street | 1593 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 | INS | 0.8 | 0.18 | 0 | INS |
| 56051 | Cornwall | Memorial Pk Bedford/Third | 6968 | 0.0 | 0.1 | 0.1 | 0.1 | 0.3 | 0.7 | 0.13 | 1.9 | 0.65 | 0 | 0 |
| 62200 | Fort Frances | Robert Moore PS | 8658 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.4 | 0.08 | 3.2 | 0.30 | 0 | 0 |
| 63200 | Thunder Bay | MTC 615 James St S | 7880 | 0.0 | 0.0 | 0.1 | 0.1 | 0.4 | 0.8 | 0.13 | 2.1 | 0.56 | 0 | 0 |
| 71068 | Sault Ste Marie | Wm. Merrifield School | 8022 | 0.0 | 0.1 | 0.1 | 0.2 | 0.4 | 1.0 | 0.19 | 2.5 | 0.71 | 0 | 0 |
| 75010 | North Bay | Dept National Defence Chippewa St | 8473 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.6 | 0.15 | 1.6 | 0.55 | 0 | 0 |
| 77203 | Sudbury | Science North | 8542 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.5 | 0.11 | 1.3 | 0.44 | 0 | 0 |

## Table 7 Total Reduced Sulphur (TRS) Statistics (1999)

**Unit: parts per billion (ppb)**

**TRS 1-hour AAQC is 27 ppb**

| | | | | PERCENTILES | | | | | | | Maximum | | Exceedances of Pulp Mill Criterion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10% | 30% | 50% | 70% | 90% | 99% | Mean | 1h | 24h | 1h |
| 12007 | Windsor | Wright/Water St | 8293 | 0 | 0 | 0 | 1 | 3 | 14 | 1.3 | 54 | 13.5 | 19 |
| 12016 | Windsor | College/South St | 8357 | 0 | 0 | 0 | 0 | 1 | 7 | 0.5 | 30 | 5.0 | 1 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 8726 | 0 | 0 | 0 | 1 | 1 | 3 | 0.5 | 9 | 2.8 | 0 |
| 22904 | Nanticoke | Walpole S Ps Sandusk Rd | 8698 | 0 | 1 | 1 | 1 | 2 | 3 | 1.0 | 17 | 4.6 | 0 |
| 22907 | Nanticoke | Rainham Rd (Near Stelco Gate) | 8595 | 0 | 1 | 1 | 1 | 2 | 7 | 1.1 | 23 | 6.2 | 0 |
| 26070 | Elmira | Union/Park | 3413 | 0 | 0 | 1 | 1 | 2 | 7 | INS | 24 | 4.9 | 0 |
| 29000 | Hamilton | Elgin/Kelly St | 8228 | 0 | 0 | 0 | 1 | 2 | 7 | 0.6 | 18 | 4.6 | 0 |
| 29025 | Hamilton | Barton/Sanford | 7475 | 0 | 0 | 1 | 1 | 3 | 8 | 1.2 | 18 | 9.6 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 7613 | 0 | 0 | 1 | 1 | 3 | 10 | 1.3 | 29 | 8.4 | 1 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 4293 | 0 | 0 | 0 | 1 | 1 | 4 | INS | 11 | 3.4 | 0 |
| 29118 | Hamilton | Main St W/Hwy403 | 8541 | 0 | 0 | 1 | 1 | 2 | 4 | 0.9 | 10 | 3.5 | 0 |
| 29531 | Hamilton | Hillyard St | 7990 | 0 | 0 | 1 | 1 | 4 | 11 | 1.3 | 32 | 8.1 | 3 |
| 29547 | Hamilton | Pier 25 | 7606 | 0 | 0 | 1 | 3 | 7 | 22 | 2.7 | 82 | 29.7 | 48 |
| 44015 | Oakville | Bronte Rd/Woburn Cres | 7052 | 1 | 1 | 1 | 2 | 2 | 4 | 1.4 | 10 | 3.8 | 0 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 8602 | 0 | 1 | 1 | 1 | 2 | 3 | 1.1 | 5 | 3.0 | 0 |
| 56051 | Cornwall | Memorial Pk Bedford/Third | 7513 | 0 | 0 | 0 | 1 | 3 | 6 | 0.9 | 20 | 7.0 | 0 |
| 61027 | Dryden | 35 Van Horne Av | 8053 | 0 | 0 | 0 | 0 | 1 | 9 | 0.5 | 77 | 12.3 | 9 |
| 62030 | Fort Frances | Portage/Church St | 8448 | 0 | 0 | 0 | 1 | 7 | 21 | 2.4 | 353 | 67.9 | 42 |
| 62032 | Fort Frances | Cemetery, Colonization Rd W | 8204 | 0 | 0 | 0 | 0 | 2 | 11 | 1.0 | 305 | 39.3 | 30 |
| 62045 | Int'l Falls | US Customs Bldg | 7893 | 0 | 0 | 0 | 2 | 10 | 29 | 3.0 | 245 | 24.5 | 91 |
| 62047 | Fort Frances | Eighth St/Cornwall Ave | 8430 | 0 | 0 | 0 | 1 | 4 | 44 | 2.6 | 493 | 101.7 | 181 |
| 62200 | Fort Frances | Robert Moore PS | 8425 | 0 | 0 | 0 | 0 | 2 | 14 | 1.2 | 491 | 96.1 | 39 |
| 63033 | Marathon | Water Tower | 8211 | 0 | 0 | 0 | 0 | 0 | 2 | 0.1 | 19 | 2.1 | 0 |
| 63046 | Thunder Bay | Can-Car Montreal St | 8580 | 0 | 0 | 0 | 0 | 4 | 14 | 1.2 | 87 | 12.2 | 13 |
| 63084 | Red Rock | Recreation Centre | 8588 | 0 | 0 | 0 | 0 | 8 | 72 | 3.8 | 190 | 54.8 | 357 |
| 63090 | Terrace Bay | St Martin School | 8504 | 0 | 0 | 0 | 0 | 1 | 8 | 0.5 | 45 | 6.6 | 2 |
| 63092 | Terrace Bay | Terrace Heights Dr | 8270 | 0 | 0 | 0 | 0 | 2 | 15 | 0.9 | 153 | 10.5 | 25 |
| 63200 | Thunder Bay | MTC 615 James St S | 8218 | 0 | 0 | 0 | 0 | 0 | 4 | 0.2 | 59 | 4.3 | 1 |
| 71068 | Sault Ste Marie | Wm. Merrifield School | 8187 | 0 | 0 | 0 | 0 | 1 | 4 | 0.2 | 25 | 4.8 | 0 |
| 77203 | Sudbury | Science North | 8703 | 0 | 0 | 0 | 0 | 1 | 1 | 0.2 | 11 | 1.4 | 0 |

## Table 8 Carbon Monoxide (CO) Statistics (1999)

**Unit: parts per million (ppm)**
**CO 1-hour AAQC is 30 ppm**
**CO 8-hour AAQC is 13 ppm**

| Stn | City | Location | Valid h | PERCENTILES | | | | | | Mean | Maximum | | # of times above Criteria | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 10% | 30% | 50% | 70% | 90% | 99% | | 1h | 8h | 1h | 8h |
| 12008 | Windsor | 467 University Av W | 8595 | 0 | 0 | 0 | 1 | 1 | 2 | 0.5 | 7 | 3.1 | 0 | 0 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 7962 | 0 | 0 | 0 | 0 | 1 | 1 | 0.2 | 4 | 1.5 | 0 | 0 |
| 15025 | London | 900 Hightbury Ave. | 8619 | 0 | 0 | 0 | 0 | 1 | 1 | 0.2 | 3 | 2.3 | 0 | 0 |
| 26060 | Kitchener | West Ave/Homewood | 8484 | 0 | 0 | 0 | 0 | 1 | 2 | 0.3 | 5 | 2.3 | 0 | 0 |
| 27067 | St Catharines | Argyle Cres (Pump Stn) | 7330 | 0 | 0 | 0 | 0 | 1 | 2 | 0.2 | 5 | 2.1 | 0 | 0 |
| 29000 | Hamilton | Elgin/Kelly St | 8395 | 1 | 1 | 1 | 1 | 1 | 2 | 1.0 | 5 | 2.1 | 0 | 0 |
| 29118 | Hamilton | Main St W/Hwy403 | 7771 | 0 | 0 | 0 | 1 | 1 | 2 | 0.5 | 3 | 2.4 | 0 | 0 |
| 31103 | Toronto | Bay/Wellesley | 1635 | 1 | 1 | 1 | 1 | 1 | 2 | INS | 3 | 2.3 | 0 | 0 |
| 33003 | Scarborough | Lawrence/Kennedy | 8715 | 0 | 1 | 1 | 1 | 1 | 2 | 0.9 | 5 | 2.8 | 0 | 0 |
| 34020 | North York | Hendon Ave (Yonge/Finch) | 8724 | 0 | 1 | 1 | 1 | 1 | 2 | 0.8 | 5 | 3.4 | 0 | 0 |
| 35003 | Etobicoke | Elmcrest Rd (Centennial Pk) | 5842 | 0 | 1 | 1 | 1 | 2 | 3 | 1.0 | 5 | 2.9 | 0 | 0 |
| 35033 | Etobicoke | Evans/Arnold Av | 6872 | 1 | 1 | 1 | 2 | 2 | 3 | 1.4 | 5 | 3.1 | 0 | 0 |
| 36030 | York | Clearview Ht. GS/Keele St | 7142 | 0 | 0 | 1 | 1 | 1 | 3 | 0.6 | 7 | 4.1 | 0 | 0 |
| 44008 | Burlington | Hwy2/North Shore Blvd E | 6951 | 0 | 1 | 1 | 1 | 1 | 2 | 0.7 | 4 | 2.0 | 0 | 0 |
| 44015 | Oakville | Bronte Rd/Woburn Cres | 7059 | 0 | 0 | 0 | 0 | 1 | 1 | 0.1 | 3 | 1.5 | 0 | 0 |
| 45025 | Oshawa | Ps Ritson Rd/Olive Av | 8711 | 0 | 0 | 1 | 1 | 1 | 2 | 0.7 | 7 | 3.4 | 0 | 0 |
| 46110 | Mississauga | Queensway W/Hurontario St | 8423 | 0 | 0 | 1 | 1 | 1 | 2 | 0.7 | 8 | 3.6 | 0 | 0 |
| 51001 | Ottawa | Mcd Gds, Rideau/Wurtemburg St | 8594 | 0 | 1 | 1 | 1 | 1 | 2 | 0.9 | 3 | 2.8 | 0 | 0 |
| 56051 | Cornwall | Memorial Pk Bedford/Third | 8687 | 0 | 0 | 0 | 1 | 1 | 2 | 0.4 | 4 | 2.3 | 0 | 0 |
| 59006 | Peterborough | 10 Hospital Drive | 8726 | 0 | 1 | 1 | 1 | 1 | 2 | 0.8 | 5 | 3.0 | 0 | 0 |
| 63200 | Thunder Bay | MTC 615 James St S | 8442 | 0 | 0 | 1 | 1 | 1 | 2 | 0.6 | 5 | 2.6 | 0 | 0 |
| 77203 | Sudbury | Science North | 8711 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 | 3 | 2.4 | 0 | 0 |

## Table 9 Nitrogen Dioxide ($NO_2$) Statistics (1999)

**Unit: parts per billion (ppb)**

**$NO_2$ 1-hour AAQC is 200 ppb**

**$NO_2$ 24-hour AAQC is 100 ppb**

| | | | PERCENTILES | | | | | | | Maximum | | # of times above Criteria | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10% | 30% | 50% | 70% | 90% | 99% | Mean | 1h | 24h | 1h | 24h |
| 12008 | Windsor | 467 University Av W | 8606 | 9 | 15 | 21 | 28 | 39 | 59 | 22.9 | 90 | 49.5 | 0 | 0 |
| 12009 | Windsor | 9725 Riverside Dr E | 7826 | 3 | 7 | 12 | 18 | 28 | 44 | 14.1 | 85 | 40.3 | 0 | 0 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 8674 | 4 | 8 | 13 | 21 | 34 | 54 | 16.7 | 122 | 51.7 | 0 | 0 |
| 15013 | Parkhill | Puc Bldg | 1540 | 5 | 6 | 10 | 15 | 23 | 43 | INS | 66 | 33.2 | 0 | 0 |
| 15025 | London | 900 Hightbury Ave. | 8473 | 6 | 12 | 17 | 24 | 36 | 55 | 19.4 | 90 | 53.5 | 0 | 0 |
| 22071 | Simcoe | Experimental Farm | 8023 | 3 | 5 | 8 | 11 | 17 | 35 | 9.3 | 80 | 34.0 | 0 | 0 |
| 22086 | Nanticoke | Cheapside Rd(3 Km S of Hwy 3) | 8206 | 3 | 4 | 6 | 9 | 15 | 28 | 7.8 | 63 | 25.7 | 0 | 0 |
| 22901 | Long Point | Provincial Park | 8463 | 2 | 3 | 5 | 7 | 14 | 30 | 6.6 | 54 | 26.5 | 0 | 0 |
| 26060 | Kitchener | West Ave/Homewood | 8335 | 4 | 7 | 11 | 17 | 28 | 47 | 14.0 | 97 | 53.2 | 0 | 0 |
| 27067 | St Catharines | Argyle Cres (Pump Stn) | 7318 | 6 | 10 | 13 | 19 | 31 | 50 | 16.2 | 75 | 49.3 | 0 | 0 |
| 29000 | Hamilton | Elgin/Kelly St | 8502 | 9 | 14 | 19 | 26 | 38 | 56 | 21.6 | 96 | 56.3 | 0 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 6528 | 10 | 18 | 28 | 36 | 48 | 72 | 28.4 | 143 | 73.0 | 0 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 8618 | 4 | 8 | 12 | 18 | 30 | 48 | 14.8 | 87 | 44.3 | 0 | 0 |
| 29118 | Hamilton | Main St W/Hwy403 | 8650 | 8 | 13 | 19 | 27 | 39 | 60 | 21.8 | 152 | 56.9 | 0 | 0 |
| 31103 | Toronto | Bay/Wellesley | 7595 | 13 | 20 | 26 | 32 | 42 | 62 | 26.9 | 106 | 68.7 | 0 | 0 |
| 31190 | Toronto | CN Tower, 301 Front St W ** | 8726 | 2 | 5 | 8 | 12 | 21 | 39 | 10.2 | 91 | 31.9 | 0 | 0 |
| 33003 | Scarborough | Lawrence/Kennedy | 8709 | 9 | 17 | 23 | 30 | 42 | 62 | 24.6 | 107 | 60.9 | 0 | 0 |
| 34020 | North York | Hendon Ave (Yonge/Finch) | 8716 | 7 | 14 | 23 | 32 | 44 | 62 | 24.3 | 104 | 56.0 | 0 | 0 |
| 35003 | Etobicoke | Elmcrest Rd (Centennial Pk) | 5838 | 10 | 16 | 23 | 31 | 41 | 63 | 24.7 | 120 | 59.1 | 0 | 0 |
| 35033 | Etobicoke | Evans/Arnold Av | 6984 | 13 | 20 | 26 | 33 | 46 | 70 | 28.4 | 106 | 60.5 | 0 | 0 |
| 36030 | York | Clearview Ht. GS/Keele St | 5850 | 6 | 9 | 13 | 19 | 27 | 46 | 15.5 | 151 | 53.1 | 0 | 0 |
| 44008 | Burlington | Hwy2/North Shore Blvd E | 7334 | 7 | 14 | 20 | 29 | 41 | 66 | 22.9 | 120 | 55.3 | 0 | 0 |
| 44015 | Oakville | Bronte Rd/Woburn Cres | 7039 | 5 | 10 | 15 | 22 | 31 | 48 | 17.2 | 80 | 38.7 | 0 | 0 |
| 45025 | Oshawa | Ps Ritson Rd/Olive Av | 8731 | 6 | 12 | 20 | 28 | 39 | 59 | 21.5 | 95 | 52.9 | 0 | 0 |
| 46110 | Mississauga | Queensway W/Hurontario St | 8702 | 10 | 16 | 22 | 29 | 41 | 63 | 24.2 | 103 | 58.9 | 0 | 0 |
| 48002 | Stouffville | Hwy47/E of Hwy48 | 8734 | 4 | 6 | 9 | 14 | 26 | 44 | 12.4 | 71 | 38.0 | 0 | 0 |
| 49010 | Dorset | Hwy 117/Paint Lake Rd | 5107 | 1 | 1 | 2 | 3 | 7 | 25 | INS | 45 | 27.5 | 0 | 0 |
| 51001 | Ottawa | Mcd Gds, Rideau/Wurtemburg St | 8592 | 1 | 5 | 9 | 16 | 27 | 47 | 12.2 | 93 | 53.9 | 0 | 0 |
| 56051 | Cornwall | Memorial Pk Bedford/Third | 7060 | 2 | 6 | 8 | 12 | 22 | 36 | 10.3 | 62 | 26.5 | 0 | 0 |
| 59006 | Peterborough | 10 Hospital Drive | 8270 | 3 | 5 | 8 | 13 | 24 | 42 | 11.1 | 64 | 34.6 | 0 | 0 |
| 63200 | Thunder Bay | MTC 615 James St S | 6045 | 3 | 7 | 12 | 18 | 32 | 56 | 15.1 | 79 | 40.0 | 0 | 0 |
| 71068 | Sault Ste Marie | Wm. Merrifield School | 2541 | 3 | 6 | 11 | 19 | 34 | 48 | INS | 66 | 35.3 | 0 | 0 |
| 77203 | Sudbury | Science North | 8724 | 1 | 3 | 6 | 9 | 16 | 38 | 7.7 | 52 | 27.7 | 0 | 0 |

** CN Tower Site - measurements taken at 444 m level

## Table 10 Nitrogen Oxide (NO) Statistics (1999)

**Unit: parts per billion (ppb)**

| | | | | PERCENTILES | | | | | | | Maximum | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10% | 30% | 50% | 70% | 90% | 99% | Mean | 1h | 24h |
| 12008 | Windsor | 467 University Av W | 8508 | 2 | 4 | 7 | 12 | 31 | 109 | 13.3 | 308 | 74.2 |
| 12009 | Little River | 9725 Riverside Dr E | 7858 | 1 | 3 | 4 | 6 | 16 | 61 | 7.7 | 189 | 50.0 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 8673 | 1 | 2 | 4 | 6 | 16 | 56 | 7.1 | 176 | 50.2 |
| 15013 | Parkhill | Puc Bldg | 1537 | 0 | 0 | 1 | 2 | 5 | 13 | INS | 51 | 9.5 |
| 15025 | London | 900 Hightbury Ave. | 8467 | 1 | 2 | 4 | 6 | 18 | 92 | 8.5 | 243 | 77.4 |
| 22071 | Simcoe | Experimental Farm | 7885 | 0 | 0 | 1 | 1 | 4 | 13 | 1.5 | 44 | 13.0 |
| 22086 | Nanticoke | Cheapside Rd(3 Km S of Hwy 3) | 8206 | 2 | 2 | 3 | 3 | 6 | 16 | 3.4 | 72 | 12.6 |
| 22901 | Long Point | Provincial Park | 8468 | 0 | 0 | 0 | 0 | 2 | 10 | 0.6 | 97 | 8.8 |
| 26060 | Kitchener | West Ave/Homewood | 8192 | 0 | 1 | 2 | 4 | 13 | 81 | 6.6 | 348 | 104.3 |
| 27067 | St Catharines | Argyle Cres (Pump Stn) | 7012 | 0 | 1 | 3 | 8 | 29 | 114 | 11.7 | 472 | 112.8 |
| 29000 | Hamilton | Elgin/Kelly St | 8507 | 0 | 2 | 4 | 9 | 28 | 132 | 12.0 | 447 | 102.7 |
| 29102 | Hamilton | 467 Beach Blvd | 6557 | 2 | 5 | 13 | 26 | 57 | 156 | 23.9 | 357 | 149.8 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 8547 | 1 | 2 | 3 | 5 | 14 | 75 | 6.7 | 201 | 64.0 |
| 29118 | Hamilton | Main St W/Hwy403 | 8617 | 1 | 3 | 6 | 16 | 66 | 234 | 23.4 | 494 | 164.7 |
| 31103 | Toronto | Bay/Wellesley | 7595 | 1 | 3 | 7 | 15 | 42 | 119 | 15.8 | 266 | 101.9 |
| 31190 | Toronto | CN Tower, 301 Front St W ** | 8726 | 0 | 1 | 1 | 2 | 6 | 31 | 2.9 | 301 | 38.6 |
| 33003 | Scarborough | Lawrence/Kennedy | 8709 | 1 | 4 | 10 | 20 | 50 | 169 | 20.7 | 429 | 123.5 |
| 34020 | North York | Hendon Ave (Yonge/Finch) | 8716 | 1 | 2 | 6 | 14 | 44 | 140 | 16.5 | 433 | 171.7 |
| 35003 | Etobicoke | Elmcrest Rd (Centennial Pk) | 5838 | 0 | 2 | 5 | 14 | 57 | 216 | 20.8 | 484 | 183.3 |
| 35033 | Etobicoke | Evans/Arnold Av | 6972 | 1 | 6 | 13 | 26 | 67 | 198 | 27.1 | 847 | 142.9 |
| 36030 | York | Clearview Ht. GS/Keele St | 7060 | 3 | 5 | 7 | 12 | 48 | 159 | 19.1 | 811 | 191.1 |
| 44008 | Burlington | Hwy2/North Shore Blvd E | 7320 | 6 | 8 | 11 | 18 | 47 | 202 | 22.6 | 464 | 187.2 |
| 44015 | Oakville | Bronte Rd/Woburn Cres | 6893 | 1 | 3 | 5 | 8 | 32 | 132 | 13.0 | 459 | 147.6 |
| 45025 | Oshawa | Ps Ritson Rd/Olive Av | 8731 | 2 | 3 | 5 | 12 | 38 | 139 | 15.1 | 357 | 120.9 |
| 46110 | Mississauga | Queensway W/Hurontario St | 8702 | 1 | 3 | 7 | 15 | 53 | 208 | 21.3 | 607 | 191.3 |
| 48002 | Stouffville | Hwy47/E of Hwy48 | 8734 | 0 | 1 | 2 | 4 | 10 | 53 | 4.9 | 334 | 107.3 |
| 49010 | Dorset | Hwy 117/Paint Lake Rd | 5549 | 0 | 0 | 0 | 0 | 0 | 6 | 0.2 | 19 | 12.1 |
| 51001 | Ottawa | Mcd Gds, Rideau/Wurtemburg St | 8577 | 5 | 8 | 13 | 15 | 24 | 78 | 14.8 | 225 | 82.8 |
| 56051 | Cornwall | Memorial Pk Bedford/Third | 6942 | 0 | 1 | 2 | 4 | 12 | 99 | 6.6 | 297 | 62.9 |
| 59006 | Peterborough | 10 Hospital Drive | 8270 | 0 | 1 | 2 | 3 | 9 | 60 | 4.6 | 179 | 69.5 |
| 63200 | Thunder Bay | MTC 615 James St S | 6045 | 1 | 2 | 5 | 10 | 33 | 134 | 13.4 | 329 | 84.6 |
| 71068 | Sault Ste Marie | Wm. Merrifield School | 2536 | 0 | 2 | 3 | 7 | 20 | 85 | INS | 177 | 44.9 |
| 77203 | Sudbury | Science North | 8724 | 0 | 2 | 3 | 5 | 9 | 43 | 5.0 | 146 | 39.7 |

** CN Tower Site - measurements taken at 444 m level

## Table 11 Total Nitrogen Oxides (NOx) Statistics (1999)

**Unit: parts per billion (ppb)**

| | | | | PERCENTILES | | | | | | | Maximum | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10% | 30% | 50% | 70% | 90% | 99% | Mean | 1h | 24h |
| 12008 | Windsor | 467 University Av W | 8493 | 14 | 21 | 29 | 40 | 67 | 154 | 37.0 | 370 | 124.3 |
| 12009 | Little River | 9725 Riverside Dr E | 6263 | 7 | 11 | 16 | 24 | 43 | 94 | 21.6 | 229 | 75.1 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 8673 | 6 | 11 | 16 | 26 | 49 | 105 | 23.5 | 272 | 90.0 |
| 15013 | Parkhill | Puc Bldg | 1539 | 6 | 8 | 12 | 18 | 29 | 47 | INS | 118 | 43.2 |
| 15025 | London | 900 Hightbury Ave. | 8469 | 8 | 13 | 19 | 27 | 49 | 137 | 25.9 | 316 | 116.1 |
| 22071 | Simcoe | Experimental Farm | 8010 | 3 | 6 | 8 | 12 | 20 | 42 | 10.4 | 75 | 40.2 |
| 22086 | Nanticoke | Cheapside Rd(3 Km S of Hwy 3) | 8206 | 5 | 7 | 9 | 12 | 20 | 39 | 11.2 | 135 | 37.3 |
| 22901 | Long Point | Provincial Park | 8470 | 2 | 4 | 5 | 8 | 16 | 36 | 7.5 | 98 | 35.1 |
| 26060 | Kitchener | West Ave/Homewood | 8319 | 6 | 9 | 14 | 21 | 40 | 118 | 20.5 | 380 | 157.0 |
| 27067 | St Catharines | Argyle Cres (Pump Stn) | 7547 | 7 | 12 | 16 | 24 | 49 | 136 | 24.8 | 498 | 129.9 |
| 29000 | Hamilton | Elgin/Kelly St | 8503 | 11 | 17 | 25 | 35 | 65 | 173 | 34.0 | 501 | 142.3 |
| 29102 | Hamilton | 467 Beach Blvd | 6555 | 13 | 26 | 43 | 63 | 98 | 207 | 51.8 | 433 | 191.9 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 8613 | 7 | 11 | 15 | 23 | 44 | 111 | 22.0 | 253 | 108.0 |
| 29118 | Hamilton | Main St W/Hwy403 | 8656 | 11 | 17 | 26 | 42 | 104 | 281 | 45.1 | 544 | 205.9 |
| 31103 | Toronto | Bay/Wellesley | 7595 | 15 | 23 | 32 | 47 | 81 | 165 | 41.9 | 331 | 137.5 |
| 31190 | Toronto | CN Tower, 301 Front St W ** | 8726 | 3 | 6 | 9 | 14 | 26 | 66 | 12.9 | 392 | 65.0 |
| 33003 | Scarborough | Lawrence/Kennedy | 8709 | 11 | 22 | 34 | 49 | 89 | 219 | 44.9 | 488 | 176.7 |
| 34020 | North York | Hendon Ave (Yonge/Finch) | 8716 | 9 | 17 | 30 | 47 | 83 | 187 | 40.7 | 488 | 210.8 |
| 35003 | Etobicoke | Elmcrest Rd (Centennial Pk) | 5838 | 11 | 20 | 29 | 46 | 93 | 265 | 45.4 | 555 | 226.2 |
| 35033 | Etobicoke | Evans/Arnold Av | 6986 | 17 | 29 | 42 | 60 | 113 | 254 | 56.6 | 918 | 176.5 |
| 36030 | York | Clearview Ht. GS/Keele St | 6560 | 8 | 13 | 20 | 31 | 74 | 200 | 33.6 | 933 | 244.2 |
| 44008 | Burlington | Hwy2/North Shore Blvd E | 7333 | 13 | 22 | 32 | 47 | 87 | 259 | 45.4 | 530 | 235.4 |
| 44015 | Oakville | Bronte Rd/Woburn Cres | 7039 | 7 | 13 | 19 | 30 | 62 | 162 | 29.6 | 503 | 179.1 |
| 45025 | Oshawa | Ps Ritson Rd/Olive Av | 8731 | 7 | 15 | 26 | 40 | 75 | 178 | 35.8 | 422 | 147.8 |
| 46110 | Mississauga | Queensway W/Hurontario St | 8702 | 13 | 21 | 30 | 45 | 91 | 253 | 45.3 | 666 | 220.7 |
| 48002 | Stouffville | Hwy47/E of Hwy48 | 8734 | 5 | 8 | 12 | 18 | 34 | 91 | 17.4 | 380 | 144.3 |
| 49010 | Dorset | Hwy 117/Paint Lake Rd | 5553 | 1 | 1 | 2 | 2 | 7 | 32 | INS | 54 | 33.7 |
| 51001 | Ottawa | Mcd Gds, Rideau/Wurtemburg St | 8592 | 11 | 16 | 21 | 29 | 51 | 115 | 27.5 | 287 | 126.4 |
| 56051 | Cornwall | Memorial Pk Bedford/Third | 7059 | 3 | 7 | 10 | 16 | 35 | 126 | 16.8 | 316 | 83.2 |
| 59006 | Peterborough | 10 Hospital Drive | 8270 | 4 | 6 | 10 | 16 | 32 | 96 | 15.6 | 198 | 100.1 |
| 63200 | Thunder Bay | MTC 615 James St S | 6045 | 5 | 10 | 17 | 29 | 64 | 181 | 28.7 | 401 | 125.0 |
| 71068 | Sault Ste Marie | Wm. Merrifield School | 2537 | 4 | 8 | 14 | 25 | 52 | 127 | INS | 241 | 79.0 |
| 77203 | Sudbury | Science North | 8724 | 4 | 6 | 9 | 13 | 23 | 78 | 12.7 | 195 | 60.3 |

** CN Tower Site - measurements taken at 444 m level

## Table 12 Ozone ($O_3$) Statistics (1999)

**Unit: parts per billion (ppb)**

**$O_3$ 1-hour AAQC is 80 ppb**

| | | | | PERCENTILE | | | | | | Arith. | Maximum | | # of times above Criterion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10 | 30 | 50 | 70 | 90 | 99 | Mean | 1h | 24h | 1 h |
| 12008 | Windsor | 467 University Av W | 8604 | 1 | 9 | 19 | 28 | 47 | 83 | 21.7 | 112 | 76.9 | 106 |
| 12016 | Windsor | College/South St | 8430 | 0 | 6 | 15 | 25 | 44 | 80 | 18.9 | 129 | 66.8 | 79 |
| 13021 | Merlin | MOE Water Pump Stn Middle Rd | 7144 | 6 | 16 | 24 | 33 | 53 | 87 | 27.2 | 129 | 76.1 | 132 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 8556 | 4 | 16 | 25 | 34 | 47 | 80 | 26.5 | 145 | 67.5 | 85 |
| 14118 | Mandaumin | Concession Rd 26 | 8286 | 8 | 19 | 27 | 35 | 51 | 85 | 29.0 | 135 | 76.6 | 145 |
| 15009 | Longwoods | Longwoods Conservation | 7282 | 5 | 16 | 25 | 33 | 49 | 85 | 26.5 | 114 | 65.6 | 102 |
| 15013 | Parkhill | Puc Bldg | 6386 | 9 | 20 | 27 | 36 | 54 | 88 | 30.0 | 116 | 78.1 | 128 |
| 15020 | Grand Bend | Water Treatment Plant | 7067 | 10 | 23 | 30 | 38 | 57 | 96 | 32.5 | 130 | 83.6 | 211 |
| 15025 | London | 900 Hightbury Ave. | 8688 | 4 | 15 | 23 | 31 | 50 | 83 | 25.8 | 117 | 76.7 | 110 |
| 18007 | Tiverton | Concession Rd 2 Lot A | 5061 | 16 | 26 | 32 | 40 | 66 | 101 | INS | 139 | 86.3 | 243 |
| 22071 | Simcoe | Experimental Farm | 8489 | 11 | 21 | 29 | 38 | 55 | 82 | 31.3 | 105 | 79.9 | 108 |
| 22901 | Long Point | Provincial Park | 8336 | 15 | 25 | 33 | 41 | 62 | 94 | 35.6 | 119 | 83.2 | 272 |
| 26060 | Kitchener | West Ave/Homewood | 8702 | 1 | 14 | 24 | 33 | 48 | 78 | 25.2 | 116 | 80.7 | 77 |
| 27067 | St Catharines | Argyle Cres (Pump Stn) | 8589 | 0 | 11 | 20 | 29 | 45 | 76 | 21.7 | 98 | 69.9 | 42 |
| 29000 | Hamilton | Elgin/Kelly St | 8431 | 0 | 9 | 17 | 25 | 41 | 70 | 19.5 | 93 | 67.3 | 24 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 8719 | 2 | 14 | 22 | 31 | 47 | 74 | 24.1 | 91 | 70.1 | 28 |
| 29118 | Hamilton | Main St W/Hwy403 | 8676 | 2 | 9 | 18 | 27 | 41 | 70 | 20.0 | 94 | 69.6 | 22 |
| 31103 | Toronto | Bay/Wellesley | 7681 | 3 | 9 | 17 | 26 | 43 | 71 | 20.2 | 96 | 60.3 | 26 |
| 31190 | Toronto | CN Tower, 301 Front St W ** | 8728 | 19 | 29 | 37 | 47 | 66 | 96 | 40.3 | 149 | 100.7 | 368 |
| 33003 | Scarborough | Lawrence/Kennedy | 8711 | 1 | 9 | 19 | 28 | 46 | 79 | 21.5 | 113 | 67.3 | 77 |
| 34020 | North York | Hendon Ave (Yonge/Finch) | 8721 | 3 | 11 | 21 | 31 | 45 | 72 | 22.8 | 105 | 66.3 | 43 |
| 35003 | Etobicoke | Elmcrest Rd (Centennial Pk) | 5835 | 2 | 6 | 16 | 25 | 37 | 65 | 18.2 | 106 | 46.5 | 14 |
| 35033 | Etobicoke | Evans/Arnold Av | 7079 | 4 | 9 | 17 | 26 | 47 | 81 | 21.5 | 100 | 62.5 | 75 |
| 36030 | York | Clearview Ht. GS/Keele St | 7027 | 3 | 9 | 20 | 31 | 48 | 82 | 23.3 | 112 | 64.8 | 78 |
| 44008 | Burlington | Hwy2/North Shore Blvd E | 7335 | 4 | 14 | 24 | 35 | 51 | 78 | 26.2 | 112 | 66.8 | 60 |
| 44015 | Oakville | Bronte Rd/Woburn Cres | 7007 | 1 | 10 | 21 | 30 | 45 | 74 | 22.4 | 93 | 56.3 | 34 |
| 45025 | Oshawa | Ps Ritson Rd/Olive Av | 8730 | 5 | 15 | 24 | 33 | 45 | 72 | 25.0 | 113 | 60.6 | 52 |
| 46110 | Mississauga | Queensway W/Hurontario St | 8703 | 2 | 10 | 19 | 29 | 46 | 82 | 22.2 | 107 | 67.8 | 97 |
| 48002 | Stouffville | Hwy47/E of Hwy48 | 8732 | 9 | 22 | 30 | 39 | 53 | 82 | 31.2 | 122 | 86.3 | 102 |
| 49010 | Dorset | Hwy 117/Paint Lake Rd | 8096 | 11 | 24 | 31 | 38 | 48 | 74 | 31.0 | 101 | 67.6 | 37 |
| 51001 | Ottawa | Mcd Gds, Rideau/Wurtemburg St | 8592 | 3 | 13 | 20 | 27 | 38 | 61 | 21.2 | 90 | 55.0 | 7 |
| 52020 | Kingston | 133 Dalton Ave | 7926 | 1 | 10 | 20 | 29 | 44 | 74 | 21.5 | 103 | 60.7 | 40 |
| 56051 | Cornwall | Memorial Pk Bedford/Third | 8275 | 5 | 17 | 24 | 32 | 46 | 73 | 25.8 | 99 | 74.6 | 32 |

## Table 12 Ozone ($O_3$) Statistics (1999)

**Unit: parts per billion (ppb)**

**$O_3$ 1-hour AAQC is 80 ppb**

| | | | | PERCENTILE | | | | | | Arith. | Maximum | | # of times above Criterion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10 | 30 | 50 | 70 | 90 | 99 | Mean | 1h | 24h | 1 h |
| 59006 | Peterborough | 10 Hospital Drive | 8716 | 10 | 23 | 30 | 38 | 51 | 82 | 31.4 | 109 | 70.6 | 100 |
| 62200 | Fort Frances | Robert Moore PS | 8660 | 8 | 18 | 25 | 32 | 43 | 65 | 25.7 | 83 | 71.2 | 3 |
| 63200 | Thunder Bay | 615 James St S | 8410 | 3 | 14 | 23 | 30 | 40 | 57 | 22.5 | 79 | 66.6 | 0 |
| 71068 | Sault Ste Marie | Wm. Merrifield School | 7869 | 4 | 16 | 24 | 31 | 44 | 68 | 24.1 | 88 | 68.0 | 8 |
| 75010 | North Bay | Dept National Defence - Chippewa St | 8595 | 7 | 19 | 29 | 38 | 49 | 77 | 29.1 | 108 | 70.3 | 55 |
| 77203 | Sudbury | Science North | 8727 | 12 | 23 | 30 | 37 | 50 | 77 | 30.7 | 97 | 77.0 | 56 |

** CN Tower site - measurements taken at 444 m level

## Table 13 Inhalable Particles ($PM_{10}$) Statistics (1999)

**Unit= micrograms/$m^3$**

**$PM_{10}$ 24-hour interim AAQC is 50 micrograms/$m^3$**

| | | | | PERCENTILES | | | | | | | Maximum | | # of times |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stn # | City | Location | Valid h | 10 | 30 | 50 | 70 | 90 | 99 | Mean | 1 h | 24 h | above Criterion |
| 12016 | Windsor | College/South St | 7493 | 9 | 15 | 22 | 31 | 48 | 82 | 25.9 | 247 | 79 | 15 |
| 14064 | Sarnia | Centennial Pk, Front St/Cn Tracks | 6097 | 4 | 8 | 13 | 21 | 40 | 67 | 17.6 | 185 | 64 | 6 |
| 15025 | London | 900 Hightbury Ave. | 8674 | 7 | 12 | 17 | 26 | 43 | 79 | 21.9 | 225 | 80 | 14 |
| 29025 | Hamilton | Barton/Sanford | 3305 | 1 | 1 | 12 | 23 | 41 | 87 | INS | 322 | 70 | 6 |
| 29531 | Hamilton | Hillyard St | 8648 | 9 | 20 | 33 | 51 | 97 | 306 | 50.2 | 1000 | 444 | 136 |
| 33003 | Scarborough | Lawrence/Kennedy | 8166 | 7 | 11 | 16 | 23 | 38 | 66 | 19.6 | 179 | 72 | 5 |
| 35003 | Etobicoke | Elmcrest Rd (Centennial Pk) | 5825 | 6 | 10 | 15 | 21 | 36 | 62 | INS | 156 | 63 | 2 |
| 35033 | Etobicoke | Evans/Arnold Av | 6909 | 8 | 15 | 21 | 29 | 45 | 77 | 24.4 | 194 | 74 | 8 |
| 44008 | Burlington | Hwy2/North Shore Blvd E | 5565 | 6 | 11 | 17 | 24 | 39 | 66 | INS | 141 | 65 | 3 |
| 48002 | Stouffville | Hwy47/E of Hwy48 | 8732 | 6 | 9 | 14 | 20 | 36 | 67 | 17.9 | 155 | 65 | 5 |
| 52020 | Kingston | 133 Dalton Street | 3413 | 4 | 11 | 17 | 25 | 40 | 81 | INS | 174 | 63 | 3 |
| 59006 | Peterborough | 10 Hospital Drive | 8721 | 5 | 8 | 13 | 19 | 35 | 60 | 16.6 | 135 | 61 | 3 |
| 71068 | Sault Ste Marie | Wm. Merrifield School | 7921 | 4 | 8 | 12 | 19 | 40 | 98 | 18.4 | 354 | 129 | 13 |

**Note: measurements made by TEOM sampler**

## Table 14 Respirable Particles ($PM_{2.5}$) Statistics (1999)

**Unit= micrograms/$m^3$**

**$PM_{25}$ 24-hour proposed CWS is 30 micrograms/$m^3$**

| Stn | City | Location | Valid h | PERCENTILES | | | | | | Arith Mean | Maximum | | # of times above Criterion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 10 | 30 | 50 | 70 | 90 | 99 | | 1 h | 24 h | |
| 12009 | Windsor | 9725 Riverside Dr E | 6807 | 4 | 8 | 13 | 20 | 36 | 63 | 17.0 | 147 | 73.2 | 37 |
| 22071 | Simcoe | Experimental Farm | 7767 | 4 | 6 | 9 | 13 | 25 | 44 | 11.8 | 72 | 45.2 | 10 |
| 26060 | Kitchener | West Ave/Homewood | 6185 | 2 | 5 | 8 | 13 | 26 | 46 | 11.3 | 85 | 49.9 | 10 |
| 27067 | St Catharines | Argyle Cres (Pump Stn) | 8636 | 4 | 7 | 11 | 16 | 29 | 48 | 14.0 | 85 | 50.0 | 20 |
| 29000 | Hamilton | Elgin/Kelly St | 7999 | 5 | 8 | 12 | 17 | 30 | 50 | 14.9 | 78 | 54.5 | 23 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 7492 | 4 | 7 | 10 | 14 | 27 | 49 | 12.9 | 72 | 54.4 | 13 |
| 31103 | Toronto | Bay/Wellesley | 1640 | 5 | 7 | 9 | 12 | 17 | 31 | INS | 56 | 31.3 | 1 |
| 34020 | North York | Hendon Ave (Yonge/Finch) | 8719 | 4 | 7 | 10 | 14 | 27 | 46 | 12.7 | 75 | 57.5 | 19 |
| 35033 | Etobicoke | Evans/Arnold Av | 6915 | 5 | 8 | 11 | 17 | 29 | 46 | 14.2 | 129 | 52.5 | 18 |
| 45025 | Oshawa | Ps Ritson Rd/Olive Av | 8706 | 4 | 7 | 10 | 14 | 26 | 46 | 12.6 | 88 | 61.6 | 16 |
| 46110 | Mississauga | Queensway W/Hurontario St | 8247 | 5 | 7 | 10 | 14 | 24 | 41 | 12.3 | 95 | 38.2 | 8 |
| 49010 | Dorset | Hwy 117/Paint Lake Rd | 5373 | 3 | 5 | 8 | 12 | 24 | 43 | INS | 134 | 44.0 | 7 |
| 51001 | Ottawa | Mcd Gds, Rideau/Wurtemburg St | 8689 | 4 | 6 | 8 | 11 | 19 | 34 | 9.8 | 55 | 38.9 | 3 |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 698 | 3 | 5 | 8 | 14 | 22 | 54 | INS | 174 | 25.8 | 0 |
| 75010 | North Bay | Dept National Defence - Chippewa St | 432 | 0 | 5 | 8 | 12 | 20 | 29 | INS | 60 | 15.1 | 0 |

**Note: measurements made by TEOM sampler**

## Table 15 Total Suspended Particulate (TSP) Statistics (1999)

**Unit= micrograms/cubic metre**

**TSP 24-hour AAQC is 120 micrograms/$m^3$**

**TSP 1-year AAQC is 60 micrograms/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max. | Arith Mean | Geom Mean | # of Times Above Criteria 24h | 1y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11001 | St Marys | 309 Thomas St | 55 | 23.4 | 35.2 | 62.0 | 89.2 | 130.6 | 179.0 | 193 | 70.4 | 55.4 | 8 | 0 |
| 12007 | Windsor | Wright/Water St | 53 | 38.2 | 51.0 | 61.0 | 80.6 | 113.8 | 147.9 | 151 | 69.2 | 62.4 | 4 | 1 |
| 12008 | Windsor | 467 University Av W | 43 | 33.8 | 49.0 | 63.0 | 75.8 | 85.6 | 121.6 | 135 | 62.6 | 57.3 | 1 | 0 |
| 12011 | Windsor | Drouillard Rd/Richmond St | 56 | 30.0 | 46.5 | 57.5 | 66.5 | 85.0 | 112.5 | 113 | 58.5 | 54.1 | 0 | 0 |
| 12013 | Windsor | Filtrat Plt 3665 Wyandotte St E | 53 | 31.8 | 49.6 | 70.0 | 103.0 | 142.8 | 217.7 | 252 | 81.3 | 69.6 | 9 | 1 |
| 12016 | Windsor | College/South St | 47 | 29.6 | 43.6 | 55.0 | 69.8 | 102.0 | 119.5 | 120 | 60.3 | 54.1 | 0 | 0 |
| 12038 | Windsor | 2885 Howard Av | 54 | 31.3 | 54.0 | 69.0 | 85.1 | 116.0 | 188.1 | 248 | 74.1 | 65.9 | 4 | 1 |
| 12058 | Windsor | Columbus Centre | 58 | 24.0 | 37.1 | 46.0 | 57.0 | 76.3 | 105.9 | 111 | 49.4 | 44.9 | 0 | 0 |
| 12061 | Amherstburg | 1.4 km NW Allied Chem | 57 | 31.6 | 49.0 | 62.0 | 81.2 | 103.0 | 126.9 | 128 | 65.2 | 59.1 | 2 | 0 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 19.2 | 30.0 | 41.5 | 48.7 | 75.9 | 105.0 | 105 | 45.1 | 39.0 | 0 | 0 |
| 14030 | Corunna | Rr1 (W of House) | 55 | 10.4 | 26.0 | 34.0 | 48.6 | 84.4 | 114.4 | 122 | 42.2 | 32.0 | 1 | 0 |
| 15025 | London | 900 Hightbury Ave. | 52 | 21.1 | 35.3 | 44.0 | 62.1 | 91.1 | 138.7 | 155 | 52.7 | 44.5 | 2 | 0 |
| 17014 | Beachville | Cyanamide Rd (Gordon Prop) | 51 | 23.0 | 39.0 | 63.0 | 75.0 | 108.0 | 166.5 | 168 | 64.0 | 53.5 | 3 | 0 |
| 17015 | Beachville | 26 Vine St (MOE Trailer) | 50 | 20.9 | 46.8 | 67.5 | 88.5 | 140.3 | 287.0 | 287 | 83.6 | 63.8 | 9 | 1 |
| 17020 | Ingersoll | Hwy 2 Rr 2 (J Spriel Prop) | 52 | 25.6 | 52.6 | 75.5 | 90.0 | 129.4 | 144.4 | 150 | 74.4 | 64.2 | 8 | 1 |
| 17021 | Embro | Oxford Cty Rd 6 (Hesston Farm) | 51 | 38.0 | 66.0 | 88.0 | 130.0 | 188.0 | 272.0 | 281 | 104.9 | 85.9 | 17 | 1 |
| 17215 | Beachville | 26 Vine St (MOE Trailer) | 38 | 60.4 | 77.0 | 98.5 | 125.7 | 154.6 | 233.6 | 258 | INS | INS | 13 | INS |
| 17315 | Beachville | 26 Vine St (MOE Trailer) | 49 | 23.0 | 48.4 | 62.0 | 73.6 | 93.8 | 162.7 | 191 | 63.5 | 55.2 | 2 | 0 |
| 22904 | Nanticoke | Walpole S Ps Sandusk Rd | 46 | 16.0 | 24.5 | 32.5 | 44.0 | 81.0 | 100.1 | 101 | 39.8 | 34.0 | 0 | 0 |
| 22907 | Nanticoke | Rainham Rd (Near Stelco Gate) | 58 | 27.0 | 37.2 | 53.5 | 67.8 | 86.2 | 164.9 | 166 | 57.7 | 50.1 | 3 | 0 |
| 22964 | Nanticoke | N 2 Km Nanticoke GS | 53 | 13.2 | 26.0 | 33.0 | 52.2 | 70.2 | 111.3 | 129 | 39.9 | 33.3 | 1 | 0 |
| 26054 | Elmira | Mill St. | 18 | 32.4 | 38.3 | 43.0 | 64.2 | 77.2 | 90.8 | 93 | INS | INS | 0 | INS |
| 26056 | Elmira | Church/Duke | 19 | 29.8 | 41.0 | 49.0 | 59.6 | 79.6 | 96.7 | 99 | INS | INS | 0 | INS |
| 26062 | Cambridge | Scott Rd./ Clemens Ave. | 33 | 22.2 | 30.6 | 47.0 | 61.0 | 74.6 | 142.6 | 150 | INS | INS | 2 | INS |
| 26064 | Cambridge | Sheffield St. | 29 | 39.8 | 56.6 | 68.0 | 81.2 | 116.8 | 164.4 | 168 | INS | INS | 2 | INS |
| 27045 | Welland | 337 Alberta/Devon St | 53 | 20.0 | 29.0 | 36.0 | 45.0 | 66.0 | 116.4 | 132 | 41.3 | 36.5 | 1 | 0 |
| 27052 | Thorold | 185 Queen St S | 58 | 34.4 | 51.1 | 63.0 | 75.8 | 104.6 | 183.5 | 224 | 67.9 | 60.8 | 2 | 1 |
| 27057 | St Catharines | 27 Plymouth Av | 56 | 30.0 | 46.0 | 57.5 | 74.5 | 101.0 | 187.9 | 211 | 65.9 | 57.5 | 5 | 0 |
| 27081 | Thorold | Beaverdams/Collier St. | 32 | 16.2 | 28.6 | 33.5 | 47.1 | 65.5 | 76.1 | 77 | INS | INS | 0 | INS |
| 27082 | Niagara Falls | 7401 Portage Rd. | 9 | 20.2 | 26.0 | 40.0 | 61.4 | 119.8 | 227.1 | 239 | INS | INS | 1 | INS |
| 29000 | Hamilton | Elgin/Kelly St | 58 | 31.7 | 41.0 | 49.5 | 65.0 | 97.2 | 163.7 | 166 | 59.6 | 53.1 | 4 | 0 |
| 29009 | Hamilton | Kenilworth | 54 | 30.6 | 43.9 | 50.5 | 64.4 | 105.5 | 142.3 | 163 | 60.2 | 54.4 | 2 | 0 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 46.4 | 59.1 | 78.0 | 103.8 | 161.2 | 202.0 | 210 | 90.6 | 81.3 | 13 | 1 |
| 29012 | Hamilton | Burlington/Wellington | 51 | 24.0 | 32.0 | 46.0 | 66.0 | 108.0 | 178.5 | 202 | 58.5 | 47.2 | 5 | 0 |
| 29025 | Hamilton | Barton/Sanford | 57 | 34.0 | 45.0 | 60.0 | 78.6 | 113.2 | 170.8 | 173 | 68.9 | 61.7 | 4 | 1 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 38.7 | 57.0 | 71.0 | 88.8 | 153.8 | 245.1 | 293 | 85.4 | 73.1 | 11 | 1 |
| 29113 | Hamilton | Gertrude/Depew | 56 | 45.5 | 66.0 | 85.0 | 120.5 | 196.5 | 232.0 | 249 | 102.4 | 87.8 | 17 | 1 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 20.6 | 28.9 | 35.5 | 47.3 | 73.8 | 142.0 | 168 | 44.9 | 38.8 | 1 | 0 |

## Table 15 Total Suspended Particulate (TSP) Statistics (1999)

**Unit= micrograms/cubic metre**

**TSP 24-hour AAQC is 120 micrograms/$m^3$**

**TSP 1-year AAQC is 60 micrograms/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max. | Arith Mean | Geom Mean | # of Times Above Criteria 24h | 1y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29118 | Hamilton | Main St W/Hwy403 | 59 | 20.8 | 33 | 42 | 59 | 94 | 109.8 | 115 | 48.3 | 42.1 | 0 | 0 |
| 29122 | Hamilton | Dundurn/York | 56 | 17.5 | 25.5 | 37.5 | 44.0 | 64.0 | 80.9 | 82 | 38.5 | 33.7 | 0 | 0 |
| 29143 | Hamilton | Keefer Court (MOE Air Shop) | 59 | 43.6 | 61.4 | 81.0 | 112.2 | 148.8 | 256.6 | 296 | 92.0 | 79.5 | 15 | 1 |
| 31045 | Toronto | Bruce Ps 51 Larchmount Av | 109 | 25.8 | 35.0 | 46.0 | 59.6 | 87.2 | 144.0 | 159 | 52.3 | 46.0 | 3 | 0 |
| 31065 | Toronto | 633 Eastern Av | 110 | 34.0 | 48.7 | 55.0 | 74.0 | 102.1 | 176.0 | 202 | 63.7 | 57.5 | 5 | 0 |
| 31082 | Toronto | Works Dept , 138 Hamilton Av | 115 | 33.8 | 47.0 | 62.0 | 78.0 | 104.0 | 130.2 | 132 | 65.3 | 58.7 | 3 | 0 |
| 44009 | Burlington | 3900 Mainway Blvd. | 9 | 19.2 | 25.6 | 44.0 | 56.2 | 76.4 | 77.8 | 78 | INS | INS | 0 | INS |
| 46047 | Mississauga | Mississauga Rd S/Port St | 54 | 35.9 | 56.9 | 70.0 | 80.1 | 104.6 | 142.6 | 149 | 70.2 | 64.2 | 4 | 1 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 55 | 18.0 | 27.0 | 34.0 | 47.0 | 66.6 | 131.3 | 134 | 40.7 | 34.0 | 2 | 0 |
| 48003 | Markham | 2800 John St. (at Woodbine) | 44 | 38.3 | 48.9 | 70.0 | 85.4 | 134.1 | 175.7 | 186 | 76.7 | 67.8 | 7 | 1 |
| 63046 | Thunder Bay | Can-Car Montreal St | 59 | 17.8 | 30.0 | 44.0 | 55.0 | 81.0 | 131.3 | 140 | 47.5 | 40.9 | 2 | 0 |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 45 | 34.4 | 69.0 | 99.0 | 128.0 | 195.6 | 357.1 | 424 | 111.6 | 91.5 | 16 | 1 |
| 72114 | Hearst | George/6th St. | 51 | 16.0 | 22.0 | 60.0 | 104.0 | 237.0 | 371.0 | 419 | 89.0 | 54.6 | 11 | 0 |

## Table 16 Lead (Pb) in TSP Statistics (1999)

**Unit = micrograms/m$^3$**

**Pb 24-hour AAQC is 2.0 micrograms/m$^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean | # of times Above Criterion 24 h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 0.010 | 0.010 | 0.010 | 0.020 | 0.038 | 0.607 | 1.200 | 0.039 | 0.016 | 0 |
| 12008 | Windsor | 467 University Av W | 43 | 0.010 | 0.010 | 0.010 | 0.020 | 0.020 | 0.036 | 0.040 | 0.014 | 0.013 | 0 |
| 12011 | Windsor | Drouillard Rd/Richmond St | 56 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.030 | 0.030 | 0.014 | 0.013 | 0 |
| 12013 | Windsor | Filtrat Plt 3665 Wyandotte St E | 53 | 0.010 | 0.010 | 0.020 | 0.020 | 0.040 | 0.055 | 0.060 | 0.019 | 0.017 | 0 |
| 12016 | Windsor | College/South St | 47 | 0.010 | 0.010 | 0.010 | 0.020 | 0.020 | 0.030 | 0.030 | 0.015 | 0.013 | 0 |
| 12038 | Windsor | 2885 Howard Av | 54 | 0.010 | 0.010 | 0.010 | 0.020 | 0.040 | 0.060 | 0.060 | 0.019 | 0.015 | 0 |
| 12058 | Windsor | Columbus Centre | 58 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.039 | 0.050 | 0.013 | 0.012 | 0 |
| 12061 | Amherstburg | 1.4 km NW Allied Chem | 57 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.034 | 0.040 | 0.013 | 0.012 | 0 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.035 | 0.040 | 0.012 | 0.011 | 0 |
| 14030 | Corunna | Rr1 (W of House) | 55 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.080 | 0.080 | 0.015 | 0.013 | 0 |
| 15025 | London | 900 Hightbury Ave. | 52 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.025 | 0.030 | 0.012 | 0.011 | 0 |
| 26054 | Elmira | Mill St. | 18 | 0.010 | 0.010 | 0.020 | 0.020 | 0.030 | 0.047 | 0.050 | INS | INS | 0 |
| 26056 | Elmira | Church/Duke | 19 | 0.010 | 0.010 | 0.020 | 0.026 | 0.076 | 0.370 | 0.420 | INS | INS | 0 |
| 26062 | Cambridge | Scott Rd../ Clemens Ave. | 33 | 0.010 | 0.010 | 0.010 | 0.010 | 0.140 | 0.284 | 0.290 | INS | INS | 0 |
| 26064 | Cambridge | Sheffield St. | 29 | 0.010 | 0.010 | 0.010 | 0.042 | 0.182 | 0.259 | 0.270 | INS | INS | 0 |
| 27052 | Thorold | 185 Queen St S | 58 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.030 | 0.030 | 0.012 | 0.011 | 0 |
| 27057 | St Catharines | 27 Plymouth Av | 56 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.035 | 0.040 | 0.013 | 0.012 | 0 |
| 27081 | Thorold | Beaverdams/Collier St. | 32 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.020 | INS | INS | 0 |
| 27082 | Niagara Falls | 7401 Portage Rd. | 9 | 0.010 | 0.010 | 0.010 | 0.010 | 0.012 | 0.019 | 0.020 | INS | INS | 0 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 0.010 | 0.010 | 0.020 | 0.030 | 0.060 | 0.084 | 0.090 | 0.029 | 0.023 | 0 |
| 29025 | Hamilton | Barton/Sanford | 57 | 0.010 | 0.010 | 0.010 | 0.010 | 0.034 | 0.054 | 0.060 | 0.016 | 0.014 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 0.010 | 0.010 | 0.015 | 0.029 | 0.060 | 0.093 | 0.110 | 0.024 | 0.018 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.019 | 0.030 | 0.010 | 0.010 | 0 |
| 31045 | Toronto | Bruce Ps 51 Larchmount Av | 109 | 0.010 | 0.010 | 0.010 | 0.020 | 0.030 | 0.049 | 0.050 | 0.017 | 0.015 | 0 |
| 31065 | Toronto | 633 Eastern Av | 110 | 0.010 | 0.020 | 0.030 | 0.063 | 0.131 | 0.218 | 0.850 | 0.060 | 0.036 | 0 |
| 31082 | Toronto | Works Dept , 138 Hamilton Av | 115 | 0.010 | 0.010 | 0.020 | 0.020 | 0.030 | 0.070 | 0.070 | 0.019 | 0.016 | 0 |
| 44009 | Burlington | 3900 Mainway Blvd. | 9 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | INS | INS | 0 |
| 46047 | Mississauga | Mississauga Rd S/Port St | 54 | 0.293 | 0.458 | 0.685 | 1.700 | 4.170 | 6.429 | 6.800 | 1.544 | 0.894 | 15 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 55 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.025 | 0.030 | 0.011 | 0.011 | 0 |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 45 | 0.010 | 0.010 | 0.010 | 0.010 | 0.036 | 0.373 | 0.580 | 0.029 | 0.014 | 0 |

## Table 17 Iron (Fe) in TSP Statistics (1999)

**Unit: micrograms/m$^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith. Mean | Geom Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 0.6 | 0.9 | 1.2 | 1.9 | 4.1 | 7.7 | 8.3 | 1.95 | 1.42 |
| 12008 | Windsor | 467 University Av W | 43 | 0.6 | 0.8 | 0.9 | 1.5 | 1.7 | 2.2 | 2.3 | 1.09 | 0.93 |
| 12011 | Windsor | Drouillard Rd/Richmond St | 56 | 0.5 | 0.7 | 0.9 | 1.3 | 2.5 | 4.1 | 4.6 | 1.22 | 0.98 |
| 12013 | Windsor | Filtrat Plt 3665 Wyandotte St E | 53 | 0.3 | 0.8 | 1.3 | 2.6 | 4.7 | 6.1 | 6.2 | 2.01 | 1.34 |
| 12016 | Windsor | College/South St | 47 | 0.4 | 0.7 | 1.1 | 1.4 | 2.6 | 3.3 | 3.4 | 1.27 | 0.99 |
| 12038 | Windsor | 2885 Howard Av | 54 | 1.0 | 1.7 | 2.7 | 6.1 | 10.7 | 14.5 | 15.0 | 4.57 | 3.10 |
| 12058 | Windsor | Columbus Centre | 58 | 0.3 | 0.6 | 0.7 | 1.0 | 1.6 | 2.7 | 2.7 | 0.88 | 0.73 |
| 12061 | Amherstburg | 1.4 km NW Allied Chem | 57 | 0.6 | 0.9 | 1.2 | 1.8 | 2.4 | 3.3 | 3.7 | 1.44 | 1.22 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 0.1 | 0.2 | 0.3 | 0.5 | 0.6 | 1.2 | 1.3 | 0.37 | 0.29 |
| 14030 | Corunna | Rr1 (W of House) | 55 | 0.1 | 0.1 | 0.3 | 0.5 | 0.8 | 2.0 | 2.2 | 0.41 | 0.27 |
| 15025 | London | 900 Hightbury Ave. | 52 | 0.1 | 0.2 | 0.4 | 0.6 | 1.0 | 1.7 | 2.0 | 0.51 | 0.37 |
| 26054 | Elmira | Mill St. | 18 | 0.2 | 0.3 | 0.5 | 0.9 | 1.9 | 3.1 | 3.1 | INS | INS |
| 26056 | Elmira | Church/Duke | 19 | 0.3 | 0.3 | 0.5 | 0.6 | 0.7 | 1.1 | 1.1 | INS | INS |
| 26062 | Cambridge | Scott Rd../ Clemens Ave. | 33 | 0.2 | 0.4 | 0.5 | 0.9 | 1.6 | 2.5 | 2.5 | INS | INS |
| 26064 | Cambridge | Sheffield St. | 29 | 0.6 | 0.8 | 1.3 | 1.9 | 3.2 | 4.4 | 4.4 | INS | INS |
| 27052 | Thorold | 185 Queen St S | 58 | 0.4 | 0.5 | 0.7 | 0.8 | 1.3 | 3.0 | 4.0 | 0.82 | 0.68 |
| 27057 | St Catharines | 27 Plymouth Av | 56 | 0.6 | 0.9 | 1.3 | 1.7 | 2.5 | 4.8 | 4.9 | 1.46 | 1.20 |
| 27081 | Thorold | Beaverdams/Collier St. | 32 | 0.2 | 0.2 | 0.4 | 0.5 | 0.7 | 1.0 | 1.1 | INS | INS |
| 27082 | Niagara Falls | 7401 Portage Rd. | 9 | 0.2 | 0.3 | 0.4 | 0.8 | 1.5 | 2.8 | 3.0 | INS | INS |
| 29011 | Hamilton | Burlington/Leeds | 58 | 1.5 | 2.3 | 3.9 | 5.0 | 9.6 | 12.0 | 12.0 | 4.29 | 3.43 |
| 29025 | Hamilton | Barton/Sanford | 57 | 0.7 | 1.0 | 1.4 | 2.1 | 6.3 | 10.4 | 11.0 | 2.37 | 1.63 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 0.8 | 1.5 | 2.4 | 3.8 | 6.6 | 11.9 | 13.0 | 3.14 | 2.21 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 0.2 | 0.3 | 0.5 | 0.6 | 2.0 | 4.3 | 4.7 | 0.76 | 0.46 |
| 44009 | Burlington | 3900 Mainway Blvd. | 9 | 0.3 | 0.5 | 0.7 | 1.3 | 1.9 | 2.3 | 2.3 | INS | INS |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 30 | 0.1 | 0.2 | 0.2 | 0.4 | 0.6 | 1.5 | 1.8 | INS | INS |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 45 | 1.4 | 2.6 | 5.9 | 9.7 | 20.8 | 39.3 | 49.0 | 8.74 | 5.36 |

## Table 18 Manganese (Mn) in TSP Statistics (1999)

**Unit = micrograms/m$^3$**

**Mn 24-hour AAQC is 2.5 micrograms/m$^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean | # of times Above Criterion 24 h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 0.012 | 0.026 | 0.038 | 0.060 | 0.100 | 0.154 | 0.170 | 0.050 | 0.038 | 0 |
| 12008 | Windsor | 467 University Av W | 43 | 0.015 | 0.023 | 0.032 | 0.040 | 0.059 | 0.066 | 0.069 | 0.033 | 0.028 | 0 |
| 12011 | Windsor | Drouillard Rd/Richmond St | 56 | 0.016 | 0.021 | 0.032 | 0.050 | 0.130 | 0.284 | 0.300 | 0.054 | 0.035 | 0 |
| 12013 | Windsor | Filtrat Plt 3665 Wyandotte St E | 53 | 0.010 | 0.034 | 0.050 | 0.148 | 0.288 | 0.344 | 0.360 | 0.107 | 0.060 | 0 |
| 12016 | Windsor | College/South St | 47 | 0.011 | 0.020 | 0.034 | 0.046 | 0.085 | 0.105 | 0.110 | 0.040 | 0.031 | 0 |
| 12038 | Windsor | 2885 Howard Av | 54 | 0.023 | 0.032 | 0.051 | 0.090 | 0.150 | 0.199 | 0.220 | 0.070 | 0.054 | 0 |
| 12058 | Windsor | Columbus Centre | 58 | 0.011 | 0.016 | 0.020 | 0.026 | 0.046 | 0.074 | 0.088 | 0.025 | 0.020 | 0 |
| 12061 | Amherstburg | 1.4 km NW Allied Chem | 57 | 0.018 | 0.026 | 0.032 | 0.043 | 0.068 | 0.087 | 0.090 | 0.037 | 0.032 | 0 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 0.001 | 0.003 | 0.007 | 0.011 | 0.017 | 0.027 | 0.028 | 0.008 | 0.006 | 0 |
| 14030 | Corunna | Rr1 (W of House) | 55 | 0.001 | 0.003 | 0.008 | 0.018 | 0.026 | 0.074 | 0.085 | 0.013 | 0.007 | 0 |
| 15025 | London | 900 Hightbury Ave. | 52 | 0.006 | 0.011 | 0.015 | 0.023 | 0.042 | 0.053 | 0.058 | 0.019 | 0.015 | 0 |
| 26054 | Elmira | Mill St. | 18 | 0.011 | 0.013 | 0.016 | 0.033 | 0.055 | 0.075 | 0.076 | INS | INS | 0 |
| 26056 | Elmira | Church/Duke | 19 | 0.011 | 0.015 | 0.022 | 0.028 | 0.060 | 0.080 | 0.082 | INS | INS | 0 |
| 26062 | Cambridge | Scott Rd./ Clemens Ave. | 33 | 0.010 | 0.015 | 0.023 | 0.035 | 0.073 | 0.114 | 0.120 | INS | INS | 0 |
| 26064 | Cambridge | Sheffield St. | 29 | 0.021 | 0.027 | 0.036 | 0.058 | 0.094 | 0.149 | 0.160 | INS | INS | 0 |
| 27052 | Thorold | 185 Queen St S | 58 | 0.016 | 0.023 | 0.028 | 0.040 | 0.055 | 0.117 | 0.160 | 0.035 | 0.029 | 0 |
| 27057 | St Catharines | 27 Plymouth Av | 56 | 0.035 | 0.065 | 0.089 | 0.120 | 0.190 | 0.321 | 0.370 | 0.103 | 0.082 | 0 |
| 27081 | Thorold | Beaverdams/Collier St. | 32 | 0.006 | 0.012 | 0.018 | 0.024 | 0.034 | 0.050 | 0.051 | INS | INS | 0 |
| 27082 | Niagara Falls | 7401 Portage Rd. | 9 | 0.012 | 0.014 | 0.017 | 0.036 | 0.063 | 0.096 | 0.100 | INS | INS | 0 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 0.099 | 0.170 | 0.235 | 0.340 | 0.596 | 1.472 | 1.700 | 0.317 | 0.243 | 0 |
| 29025 | Hamilton | Barton/Sanford | 57 | 0.053 | 0.081 | 0.100 | 0.184 | 0.476 | 0.744 | 0.750 | 0.188 | 0.128 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 0.044 | 0.084 | 0.155 | 0.190 | 0.383 | 0.766 | 1.000 | 0.184 | 0.128 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 0.008 | 0.013 | 0.021 | 0.032 | 0.107 | 0.219 | 0.230 | 0.040 | 0.024 | 0 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 30 | 0.006 | 0.009 | 0.013 | 0.015 | 0.022 | 0.064 | 0.076 | INS | INS | 0 |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 45 | 0.124 | 0.242 | 0.300 | 0.426 | 0.716 | 1.025 | 1.100 | 0.372 | 0.290 | 0 |

## Table 19 Nickel (Ni) in TSP Statistics (1999)

**Unit = micrograms/m$^3$**

**Ni 24-hour AAQC is 2.0 micrograms/m$^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean | # of times Above Criterion 24 h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 0.001 | 0.001 | 0.001 | 0.001 | 0.005 | 0.010 | 0.010 | 0.002 | 0.001 | 0 |
| 12008 | Windsor | 467 University Av W | 43 | 0.001 | 0.001 | 0.001 | 0.002 | 0.005 | 0.013 | 0.013 | 0.002 | 0.002 | 0 |
| 12011 | Windsor | Drouillard Rd/Richmond St | 56 | 0.001 | 0.001 | 0.001 | 0.001 | 0.007 | 0.014 | 0.016 | 0.003 | 0.002 | 0 |
| 12013 | Windsor | Filtrat Plt 3665 Wyandotte St E | 53 | 0.001 | 0.001 | 0.001 | 0.001 | 0.006 | 0.018 | 0.019 | 0.002 | 0.001 | 0 |
| 12016 | Windsor | College/South St | 47 | 0.001 | 0.001 | 0.001 | 0.001 | 0.006 | 0.010 | 0.010 | 0.002 | 0.001 | 0 |
| 12038 | Windsor | 2885 Howard Av | 54 | 0.001 | 0.001 | 0.002 | 0.006 | 0.011 | 0.017 | 0.018 | 0.004 | 0.003 | 0 |
| 12058 | Windsor | Columbus Centre | 58 | 0.001 | 0.001 | 0.001 | 0.001 | 0.003 | 0.006 | 0.009 | 0.002 | 0.001 | 0 |
| 12061 | Amherstburg | 1.4 km NW Allied Chem | 57 | 0.001 | 0.001 | 0.001 | 0.001 | 0.004 | 0.017 | 0.019 | 0.002 | 0.002 | 0 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 0.001 | 0.001 | 0.001 | 0.002 | 0.009 | 0.069 | 0.100 | 0.005 | 0.002 | 0 |
| 14030 | Corunna | Rr1 (W of House) | 55 | 0.001 | 0.001 | 0.001 | 0.001 | 0.004 | 0.007 | 0.007 | 0.002 | 0.001 | 0 |
| 15025 | London | 900 Hightbury Ave. | 52 | 0.001 | 0.001 | 0.001 | 0.001 | 0.005 | 0.006 | 0.007 | 0.002 | 0.001 | 0 |
| 26054 | Elmira | Mill St. | 18 | 0.001 | 0.001 | 0.001 | 0.003 | 0.004 | 0.008 | 0.009 | INS | INS | 0 |
| 26056 | Elmira | Church/Duke | 19 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.004 | 0.004 | INS | INS | 0 |
| 26062 | Cambridge | Scott Rd../ Clemens Ave. | 33 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.018 | 0.025 | INS | INS | 0 |
| 26064 | Cambridge | Sheffield St. | 29 | 0.001 | 0.001 | 0.001 | 0.005 | 0.013 | 0.046 | 0.057 | INS | INS | 0 |
| 27052 | Thorold | 185 Queen St S | 58 | 0.001 | 0.001 | 0.001 | 0.001 | 0.005 | 0.032 | 0.043 | 0.003 | 0.002 | 0 |
| 27057 | St Catharines | 27 Plymouth Av | 56 | 0.001 | 0.001 | 0.001 | 0.001 | 0.004 | 0.011 | 0.012 | 0.002 | 0.001 | 0 |
| 27081 | Thorold | Beaverdams/Collier St. | 32 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.003 | 0.004 | INS | INS | 0 |
| 27082 | Niagara Falls | 7401 Portage Rd. | 9 | 0.001 | 0.001 | 0.001 | 0.002 | 0.008 | 0.017 | 0.018 | INS | INS | 0 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 0.001 | 0.001 | 0.001 | 0.005 | 0.008 | 0.018 | 0.019 | 0.004 | 0.002 | 0 |
| 29025 | Hamilton | Barton/Sanford | 57 | 0.001 | 0.001 | 0.001 | 0.002 | 0.006 | 0.017 | 0.018 | 0.003 | 0.002 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 0.001 | 0.001 | 0.001 | 0.002 | 0.007 | 0.013 | 0.017 | 0.003 | 0.002 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.004 | 0.005 | 0.001 | 0.001 | 0 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 30 | 0.001 | 0.001 | 0.001 | 0.003 | 0.005 | 0.006 | 0.006 | INS | INS | 0 |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 45 | 0.001 | 0.001 | 0.001 | 0.001 | 0.005 | 0.015 | 0.018 | 0.002 | 0.001 | 0 |

## Table 20 Chromium (Cr) in TSP Statistics (1999)

**Units = micrograms/m$^3$**

**Cr 24-hour AAQC is 1.5 micrograms/m$^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith. Mean | Geom Mean | Above Criterion 24 h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 0.001 | 0.003 | 0.006 | 0.008 | 0.018 | 0.024 | 0.025 | 0.007 | 0.005 | 0 |
| 12008 | Windsor | 467 University Av W | 43 | 0.001 | 0.003 | 0.006 | 0.008 | 0.010 | 0.013 | 0.014 | 0.006 | 0.004 | 0 |
| 12011 | Windsor | Drouillard Rd/Richmond St | 56 | 0.001 | 0.001 | 0.003 | 0.006 | 0.012 | 0.028 | 0.030 | 0.005 | 0.003 | 0 |
| 12013 | Windsor | Filtrat Plt 3665 Wyandotte St E | 53 | 0.001 | 0.005 | 0.007 | 0.013 | 0.027 | 0.034 | 0.034 | 0.011 | 0.007 | 0 |
| 12016 | Windsor | College/South St | 47 | 0.001 | 0.003 | 0.005 | 0.008 | 0.011 | 0.020 | 0.022 | 0.006 | 0.004 | 0 |
| 12038 | Windsor | 2885 Howard Av | 54 | 0.006 | 0.010 | 0.014 | 0.029 | 0.051 | 0.071 | 0.077 | 0.023 | 0.016 | 0 |
| 12058 | Windsor | Columbus Centre | 58 | 0.001 | 0.001 | 0.003 | 0.005 | 0.008 | 0.013 | 0.014 | 0.004 | 0.003 | 0 |
| 12061 | Amherstburg | 1.4 km NW Allied Chem | 57 | 0.001 | 0.003 | 0.006 | 0.010 | 0.013 | 0.020 | 0.023 | 0.007 | 0.005 | 0 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 0.001 | 0.001 | 0.001 | 0.002 | 0.007 | 0.009 | 0.010 | 0.002 | 0.002 | 0 |
| 14030 | Corunna | Rr1 (W of House) | 55 | 0.001 | 0.001 | 0.001 | 0.003 | 0.008 | 0.020 | 0.023 | 0.003 | 0.002 | 0 |
| 15025 | London | 900 Hightbury Ave. | 52 | 0.001 | 0.001 | 0.001 | 0.004 | 0.006 | 0.007 | 0.008 | 0.003 | 0.002 | 0 |
| 26054 | Elmira | Mill St. | 18 | 0.001 | 0.003 | 0.004 | 0.006 | 0.010 | 0.015 | 0.016 | INS | INS | 0 |
| 26056 | Elmira | Church/Duke | 19 | 0.001 | 0.002 | 0.004 | 0.005 | 0.007 | 0.011 | 0.012 | INS | INS | 0 |
| 26062 | Cambridge | Scott Rd../ Clemens Ave. | 33 | 0.001 | 0.001 | 0.001 | 0.003 | 0.006 | 0.041 | 0.056 | INS | INS | 0 |
| 26064 | Cambridge | Sheffield St. | 29 | 0.003 | 0.008 | 0.011 | 0.015 | 0.027 | 0.197 | 0.200 | INS | INS | 0 |
| 27052 | Thorold | 185 Queen St S | 57 | 0.007 | 0.017 | 0.026 | 0.042 | 0.164 | 0.843 | 1.000 | 0.078 | 0.029 | 0 |
| 27057 | St Catharines | 27 Plymouth Av | 56 | 0.002 | 0.005 | 0.008 | 0.012 | 0.017 | 0.029 | 0.037 | 0.009 | 0.006 | 0 |
| 27081 | Thorold | Beaverdams/Collier St. | 32 | 0.001 | 0.003 | 0.005 | 0.008 | 0.012 | 0.016 | 0.017 | INS | INS | 0 |
| 27082 | Niagara Falls | 7401 Portage Rd. | 9 | 0.008 | 0.034 | 0.069 | 0.224 | 0.340 | 0.412 | 0.420 | INS | INS | 0 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 0.013 | 0.024 | 0.035 | 0.047 | 0.071 | 0.236 | 0.390 | 0.045 | 0.033 | 0 |
| 29025 | Hamilton | Barton/Sanford | 57 | 0.005 | 0.009 | 0.014 | 0.024 | 0.065 | 0.154 | 0.210 | 0.028 | 0.015 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 0.003 | 0.009 | 0.017 | 0.022 | 0.043 | 0.077 | 0.095 | 0.020 | 0.013 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 0.001 | 0.001 | 0.002 | 0.006 | 0.016 | 0.034 | 0.034 | 0.006 | 0.003 | 0 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 30 | 0.001 | 0.001 | 0.002 | 0.004 | 0.007 | 0.009 | 0.010 | INS | INS | 0 |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 45 | 0.005 | 0.011 | 0.020 | 0.037 | 0.066 | 0.120 | 0.150 | 0.030 | 0.019 | 0 |

## Table 21 Vanadium (V) in TSP Statistics (1999)

**Unit = micrograms/m$^3$**

**V 24-hour AAQC is 2.0 micrograms/m$^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean | # of times above Criterion 24 h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 0.001 | 0.001 | 0.002 | 0.006 | 0.015 | 0.028 | 0.030 | 0.005 | 0.003 | 0 |
| 12008 | Windsor | 467 University Av W | 43 | 0.001 | 0.001 | 0.001 | 0.004 | 0.012 | 0.024 | 0.028 | 0.005 | 0.002 | 0 |
| 12011 | Windsor | Drouillard Rd/Richmond St | 56 | 0.001 | 0.001 | 0.001 | 0.004 | 0.012 | 0.029 | 0.038 | 0.005 | 0.002 | 0 |
| 12013 | Windsor | Filtrat Plt 3665 Wyandotte St E | 53 | 0.001 | 0.001 | 0.004 | 0.008 | 0.016 | 0.027 | 0.033 | 0.006 | 0.003 | 0 |
| 12016 | Windsor | College/South St | 47 | 0.001 | 0.001 | 0.004 | 0.007 | 0.011 | 0.019 | 0.023 | 0.005 | 0.003 | 0 |
| 12038 | Windsor | 2885 Howard Av | 54 | 0.001 | 0.002 | 0.006 | 0.011 | 0.026 | 0.043 | 0.051 | 0.010 | 0.005 | 0 |
| 12058 | Windsor | Columbus Centre | 58 | 0.001 | 0.001 | 0.001 | 0.006 | 0.011 | 0.022 | 0.024 | 0.004 | 0.003 | 0 |
| 12061 | Amherstburg | 1.4 km NW Allied Chem | 57 | 0.001 | 0.001 | 0.001 | 0.005 | 0.012 | 0.023 | 0.034 | 0.005 | 0.003 | 0 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 0.001 | 0.001 | 0.002 | 0.009 | 0.016 | 0.162 | 0.250 | 0.012 | 0.003 | 0 |
| 14030 | Corunna | Rr1 (W of House) | 55 | 0.001 | 0.001 | 0.001 | 0.003 | 0.008 | 0.016 | 0.019 | 0.003 | 0.002 | 0 |
| 15025 | London | 900 Hightbury Ave. | 52 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.006 | 0.006 | 0.001 | 0.001 | 0 |
| 26054 | Elmira | Mill St. | 18 | 0.001 | 0.001 | 0.001 | 0.002 | 0.008 | 0.011 | 0.012 | INS | INS | 0 |
| 26056 | Elmira | Church/Duke | 19 | 0.001 | 0.001 | 0.001 | 0.001 | 0.004 | 0.006 | 0.006 | INS | INS | 0 |
| 26062 | Cambridge | Scott Rd../ Clemens Ave. | 33 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.005 | 0.005 | INS | INS | 0 |
| 26064 | Cambridge | Sheffield St. | 29 | 0.001 | 0.001 | 0.002 | 0.004 | 0.010 | 0.013 | 0.014 | INS | INS | 0 |
| 27052 | Thorold | 185 Queen St S | 58 | 0.001 | 0.003 | 0.006 | 0.009 | 0.018 | 0.059 | 0.062 | 0.010 | 0.005 | 0 |
| 27057 | St Catharines | 27 Plymouth Av | 56 | 0.001 | 0.001 | 0.002 | 0.007 | 0.011 | 0.022 | 0.023 | 0.005 | 0.003 | 0 |
| 27081 | Thorold | Beaverdams/Collier St. | 32 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.007 | 0.007 | INS | INS | 0 |
| 27082 | Niagara Falls | 7401 Portage Rd. | 9 | 0.001 | 0.001 | 0.004 | 0.008 | 0.019 | 0.042 | 0.045 | INS | INS | 0 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 0.001 | 0.007 | 0.011 | 0.021 | 0.039 | 0.049 | 0.054 | 0.015 | 0.009 | 0 |
| 29025 | Hamilton | Barton/Sanford | 56 | 0.001 | 0.001 | 0.003 | 0.007 | 0.017 | 0.034 | 0.036 | 0.007 | 0.003 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 0.001 | 0.001 | 0.006 | 0.010 | 0.024 | 0.046 | 0.047 | 0.010 | 0.005 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 0.001 | 0.001 | 0.001 | 0.001 | 0.005 | 0.012 | 0.014 | 0.002 | 0.002 | 0 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 30 | 0.001 | 0.001 | 0.001 | 0.004 | 0.007 | 0.009 | 0.010 | INS | INS | 0 |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 45 | 0.001 | 0.005 | 0.009 | 0.026 | 0.037 | 0.086 | 0.110 | 0.018 | 0.009 | 0 |

## Table 22 Copper (Cu) in TSP Statistics ( 1999)

**Unit = micrograms/m$^3$**

**Cu 24-hour AAQC is 50 micrograms/m$^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean | # of times Above Criterion 24 h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 0.00 | 0.01 | 0.02 | 0.04 | 0.05 | 0.54 | 1.00 | 0.05 | 0.02 | 0 |
| 12008 | Windsor | 467 University Av W | 43 | 0.00 | 0.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.04 | 0.01 | 0.01 | 0 |
| 12011 | Windsor | Drouillard Rd/Richmond St | 56 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.05 | 0.08 | 0.01 | 0.00 | 0 |
| 12013 | Windsor | Filtrat Plt 3665 Wyandotte St E | 53 | 0.00 | 0.01 | 0.02 | 0.03 | 0.10 | 0.14 | 0.15 | 0.03 | 0.02 | 0 |
| 12016 | Windsor | College/South St | 47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.04 | 0.11 | 0.14 | 0.02 | 0.01 | 0 |
| 12038 | Windsor | 2885 Howard Av | 54 | 0.01 | 0.02 | 0.03 | 0.05 | 0.07 | 0.09 | 0.09 | 0.03 | 0.03 | 0 |
| 12058 | Windsor | Columbus Centre | 58 | 0.00 | 0.02 | 0.03 | 0.04 | 0.05 | 0.07 | 0.08 | 0.03 | 0.02 | 0 |
| 12061 | Amherstburg | 1.4 km NW Allied Chem | 57 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.04 | 0.04 | 0.01 | 0.00 | 0 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 0.01 | 0.03 | 0.05 | 0.07 | 0.16 | 0.30 | 0.33 | 0.07 | 0.04 | 0 |
| 14030 | Corunna | Rr1 (W of House) | 55 | 0.00 | 0.01 | 0.02 | 0.03 | 0.09 | 0.14 | 0.15 | 0.03 | 0.01 | 0 |
| 15025 | London | 900 Hightbury Ave. | 52 | 0.26 | 0.52 | 0.75 | 0.92 | 1.00 | 1.75 | 1.80 | 0.71 | 0.58 | 0 |
| 26054 | Elmira | Mill St. | 18 | 0.02 | 0.03 | 0.05 | 0.06 | 0.07 | 0.09 | 0.09 | INS | INS | 0 |
| 26056 | Elmira | Church/Duke | 20 | 0.02 | 0.04 | 0.04 | 0.04 | 0.05 | 0.07 | 0.07 | INS | INS | 0 |
| 26062 | Cambridge | Scott Rd../ Clemens Ave. | 35 | 0.02 | 0.07 | 0.09 | 0.11 | 0.13 | 0.20 | 0.20 | INS | INS | 0 |
| 26064 | Cambridge | Sheffield St. | 31 | 0.06 | 0.07 | 0.09 | 0.13 | 0.17 | 0.21 | 0.22 | INS | INS | 0 |
| 27052 | Thorold | 185 Queen St S | 58 | 0.05 | 0.11 | 0.14 | 0.17 | 0.23 | 0.27 | 0.28 | 0.14 | 0.11 | 0 |
| 27057 | St Catharines | 27 Plymouth Av | 56 | 0.06 | 0.10 | 0.13 | 0.18 | 0.23 | 0.25 | 0.25 | 0.14 | 0.13 | 0 |
| 27081 | Thorold | Beaverdams/Collier St. | 32 | 0.00 | 0.05 | 0.09 | 0.12 | 0.14 | 0.22 | 0.25 | INS | INS | 0 |
| 27082 | Niagara Falls | 7401 Portage Rd. | 9 | 0.02 | 0.05 | 0.06 | 0.10 | 0.17 | 0.22 | 0.23 | INS | INS | 0 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 0.01 | 0.04 | 0.06 | 0.08 | 0.10 | 0.15 | 0.16 | 0.06 | 0.04 | 0 |
| 29025 | Hamilton | Barton/Sanford | 57 | 0.03 | 0.06 | 0.09 | 0.12 | 0.15 | 0.22 | 0.25 | 0.09 | 0.08 | 0 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 0.03 | 0.07 | 0.09 | 0.10 | 0.12 | 0.14 | 0.16 | 0.08 | 0.07 | 0 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 0.00 | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.02 | 0.02 | 0 |
| 46117 | Mississauga | Meadow Pk, Apple Lane Club | 30 | 0.18 | 0.21 | 0.24 | 0.26 | 0.35 | 0.44 | 0.45 | INS | INS | 0 |
| 71042 | Sault Ste Marie | Pumphouse, Bonney St | 45 | 0.02 | 0.04 | 0.08 | 0.10 | 0.14 | 0.29 | 0.37 | 0.08 | 0.06 | 0 |

## Table 23 Nitrate ($NO_3^-$) in TSP Statistics (1999)

**Unit = micrograms/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 2.1 | 3.2 | 4.6 | 5.9 | 8.0 | 11.4 | 13.6 | 4.8 | 4.2 |
| 12008 | Windsor | 467 University Av W | 43 | 2.1 | 3.3 | 5.0 | 6.4 | 8.3 | 12.6 | 13.7 | 5.2 | 4.5 |
| 12016 | Windsor | College/South St | 47 | 1.6 | 2.3 | 3.9 | 5.3 | 8.6 | 13.7 | 16.6 | 4.5 | 3.7 |
| 12038 | Windsor | 2885 Howard Av | 54 | 1.4 | 2.6 | 4.1 | 5.7 | 8.3 | 11.6 | 12.2 | 4.6 | 3.8 |
| 12058 | Windsor | Columbus Centre | 58 | 1.8 | 2.5 | 4.0 | 5.1 | 7.2 | 9.9 | 11.2 | 4.2 | 3.6 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 1.2 | 2.4 | 4.5 | 6.0 | 8.6 | 11.0 | 11.7 | 4.6 | 3.7 |
| 22904 | Nanticoke | Walpole S Ps Sandusk Rd | 46 | 1.7 | 3.1 | 4.0 | 5.8 | 8.4 | 13.4 | 15.5 | 4.8 | 4.0 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 1.3 | 2.5 | 3.3 | 4.8 | 6.9 | 10.6 | 12.1 | 3.8 | 3.2 |
| 29025 | Hamilton | Barton/Sanford | 57 | 1.4 | 2.8 | 4.3 | 6.2 | 7.4 | 12.3 | 14.3 | 4.5 | 3.8 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 1.7 | 2.9 | 4.7 | 6.0 | 7.9 | 11.0 | 11.2 | 4.8 | 4.1 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 1.8 | 2.5 | 4.1 | 5.7 | 7.5 | 12.1 | 14.5 | 4.5 | 3.7 |

## Table 24 Sulphate ($SO_4^{2-}$) in TSP Statistics (1999)

**Unit =micrograms/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12007 | Windsor | Wright/Water St | 53 | 10.5 | 14.0 | 16.2 | 17.5 | 20.9 | 26.0 | 27.6 | 15.9 | 15.4 |
| 12008 | Windsor | 467 University Av W | 43 | 8.1 | 12.5 | 14.9 | 17.3 | 21.0 | 26.5 | 27.3 | 15.1 | 14.2 |
| 12016 | Windsor | College/South St | 47 | 9.4 | 11.3 | 14.4 | 17.2 | 23.2 | 25.3 | 25.3 | 15.0 | 14.0 |
| 12038 | Windsor | 2885 Howard Av | 54 | 7.6 | 11.8 | 14.3 | 16.5 | 20.0 | 25.1 | 26.7 | 13.9 | 12.8 |
| 12058 | Windsor | Columbus Centre | 58 | 7.2 | 11.9 | 13.4 | 15.4 | 17.9 | 24.9 | 25.5 | 13.5 | 12.8 |
| 14016 | Courtright | Hwy40 (OPP Lambton GS) | 52 | 9.2 | 12.8 | 14.9 | 17.5 | 20.8 | 26.4 | 30.0 | 15.2 | 14.3 |
| 22904 | Nanticoke | Walpole S Ps Sandusk Rd | 46 | 7.3 | 12.7 | 15.5 | 17.2 | 21.9 | 31.9 | 35.0 | 15.0 | 13.7 |
| 29011 | Hamilton | Burlington/Leeds | 58 | 11.1 | 12.8 | 14.4 | 18.2 | 21.5 | 29.0 | 29.2 | 15.6 | 14.9 |
| 29025 | Hamilton | Barton/Sanford | 57 | 9.3 | 11.3 | 14.2 | 17.5 | 20.8 | 27.6 | 27.6 | 15.0 | 14.1 |
| 29102 | Hamilton | 467 Beach Blvd | 58 | 9.1 | 13.8 | 17.7 | 19.5 | 24.1 | 32.9 | 34.3 | 17.2 | 16.1 |
| 29114 | Hamilton | Vickers Rd/East 18Th St | 54 | 8.4 | 11.0 | 13.6 | 16.4 | 19.1 | 26.4 | 26.7 | 14.0 | 13.2 |

## Table 25 Inhalable Particles ($PM_{10}$) 24-Hour Statistics (1999)

**Unit =micrograms/$m^3$**

**24h $PM_{10}$ Interim AAQC is 50 ug/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max. | Arith Mean | Geom Mean | % of days >50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12507 | Windsor | PM10 Wright/Water St | 57 | 10.6 | 14.0 | 20.0 | 28.0 | 43.4 | 51.4 | 52 | 24.2 | 20.9 | 7.0 |
| 12508 | Windsor | PM10 467 University Ave W | 41 | 15.0 | 21.0 | 28.0 | 38.0 | 50.0 | 58.8 | 62 | 30.0 | 27.1 | 9.8 |
| 12513 | Windsor | PM10 3665 Wyndotte St E | 51 | 12.0 | 16.0 | 24.0 | 38.0 | 55.0 | 67.5 | 71 | 29.2 | 24.3 | 13.7 |
| 12556 | Windosr | PM101400 Roselawn Dr. | 54 | 10.0 | 14.0 | 17.0 | 22.0 | 38.4 | 104.8 | 144 | 22.8 | 18.6 | 5.6 |
| 12559 | Windsor | PM10 5305 Adstol Ave. | 46 | 7.0 | 10.0 | 17.0 | 22.5 | 42.5 | 51.8 | 54 | 19.4 | 15.7 | 2.2 |
| 12583 | Windsor | PM10 13765 St. Gregory's Rd. | 52 | 6.0 | 13.0 | 18.5 | 25.0 | 38.9 | 72.3 | 85 | 21.5 | 17.2 | 5.8 |
| 14550 | Sarnia | PM10 6th Line, Moore TWP | 49 | 6.0 | 8.0 | 13.0 | 16.6 | 27.0 | 40.7 | 45 | 14.4 | 11.6 | 0.0 |
| 14564 | Sarnia | PM10 Centenial Park/ Front St. | 51 | 6.0 | 10.0 | 16.0 | 27.0 | 42.0 | 77.0 | 92 | 22.7 | 16.7 | 7.8 |
| 15525 | London | PM10 900 Highbury Ave. E. | 56 | 7.0 | 11.5 | 17.0 | 25.5 | 47.5 | 64.8 | 67 | 22.2 | 17.6 | 8.9 |
| 17550 | Beachville | PM10 Earl Lantz Property | 49 | 10.0 | 15.0 | 25.0 | 34.6 | 72.0 | 182.0 | 218 | 35.2 | 25.2 | 14.3 |
| 22304 | Nanticoke | PM10 Walpole Ps Sandusk Rd | 59 | 5.0 | 8.4 | 12.0 | 20.6 | 34.0 | 49.8 | 55 | 16.8 | 12.5 | 1.7 |
| 26365 | Elmira | PM10 Mill St. | 9 | 8.8 | 9.8 | 14.0 | 21.4 | 29.0 | 29.0 | 29 | INS | INS | 0.0 |
| 27308 | St Catharines | PM10 71 King Street | 58 | 8.7 | 16.1 | 22.0 | 29.0 | 42.6 | 53.9 | 55 | 24.0 | 20.5 | 6.9 |
| 27352 | Thorold | PM10 185 Queen St S | 56 | 13.0 | 17.5 | 24.0 | 30.0 | 48.0 | 100.1 | 132 | 28.7 | 24.2 | 8.9 |
| 29300 | Hamilton | PM10 Elgin/Kelly St | 57 | 9.6 | 15.8 | 23.0 | 28.2 | 45.4 | 69.9 | 71 | 25.5 | 21.4 | 8.8 |
| 29302 | Hamilton | PM10 467 Beach Blvd | 53 | 11.0 | 18.0 | 26.0 | 34.6 | 55.8 | 104.4 | 134 | 30.8 | 24.7 | 13.2 |
| 29313 | Hamilton | PM10 Gertrude/Depew | 54 | 21.3 | 29.0 | 36.5 | 48.4 | 79.3 | 95.2 | 101 | 43.1 | 37.7 | 29.6 |
| 29324 | Hamilton | PM10 Buchanan Park Ps | 50 | 7.9 | 11.0 | 18.0 | 30.3 | 41.3 | 59.6 | 63 | 21.8 | 17.3 | 4.0 |
| 31127 | Toronto | PM10 Bay/Wellesley | 11 | 5.0 | 8.0 | 10.0 | 13.0 | 13.0 | 13.9 | 14 | INS | INS | 0.0 |
| 35127 | Etobicoke | PM10 Evans/Arnold | 68 | 13.0 | 20.0 | 28.0 | 33.8 | 42.0 | 53.0 | 53 | 27.2 | 24.2 | 4.4 |
| 44127 | Oakville | PM10 Bronte Rd/Woburn Cr | 57 | 8.0 | 13.8 | 16.0 | 25.0 | 40.8 | 46.4 | 47 | 20.6 | 17.0 | 0.0 |
| 46127 | Mississauga | PM10 Meadwood Park | 57 | 8.0 | 11.8 | 16.0 | 26.2 | 41.0 | 50.8 | 57 | 20.8 | 16.8 | 1.8 |
| 62135 | Fort Frances | PM10 Legion 250 Church | 54 | 6.3 | 12.0 | 16.0 | 23.0 | 29.0 | 55.8 | 60 | 18.2 | 15.3 | 3.7 |
| 63201 | Thunder Bay | PM10 615 James St S | 59 | 6.8 | 12.0 | 15.0 | 23.0 | 31.0 | 46.4 | 47 | 18.1 | 15.0 | 0.0 |
| 71342 | Sault Ste Marie | PM10 Bonney St | 49 | 11.6 | 24.4 | 42.0 | 63.6 | 94.6 | 209.8 | 217 | 52.3 | 37.4 | 40.8 |
| 71368 | Sault Ste Marie | PM10 Wm Merrifield S | 49 | 8.0 | 12.0 | 17.0 | 27.2 | 43.6 | 103.7 | 133 | 23.5 | 18.2 | 8.2 |
| 77570 | Copper Cliff | PM10 Market St | 51 | 7.0 | 9.0 | 14.0 | 21.0 | 34.0 | 53.5 | 56 | 17.9 | 14.5 | 3.9 |

## Table 26 Copper (Cu) in $PM_{10}$ Statistics ( 1999)

**Unit = micrograms/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10 | 30 | 50 | 70 | 90 | 99 | Max | Arith Mean | Geom Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12507 | Windsor | PM10 Wright/Water St | 57 | 0.005 | 0.005 | 0.005 | 0.006 | 0.022 | 0.427 | 0.900 | 0.025 | 0.008 |
| 12508 | Windsor | PM10 467 University Ave W | 41 | 0.005 | 0.005 | 0.010 | 0.020 | 0.030 | 0.038 | 0.040 | 0.014 | 0.011 |
| 12513 | Windsor | PM10 3665 Wyndotte St E | 51 | 0.005 | 0.005 | 0.005 | 0.010 | 0.015 | 0.028 | 0.035 | 0.008 | 0.007 |
| 12556 | Windosr | PM10 1400 Roselawn Dr. | 54 | 0.005 | 0.005 | 0.005 | 0.005 | 0.009 | 0.022 | 0.025 | 0.006 | 0.006 |
| 12559 | Windsor | PM10 5305 Adstol Ave. | 46 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.010 | 0.010 | 0.005 | 0.005 |
| 12583 | Windsor | PM10 13765 St. Gregory's Rd. | 52 | 0.005 | 0.005 | 0.005 | 0.005 | 0.010 | 0.022 | 0.025 | 0.006 | 0.006 |
| 14550 | Sarnia | PM10 6th Line, Moore TWP | 50 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.008 | 0.010 | 0.005 | 0.005 |
| 14564 | Sarnia | PM10 Centenial Park/ Front St. | 51 | 0.005 | 0.005 | 0.005 | 0.005 | 0.010 | 0.033 | 0.035 | 0.007 | 0.006 |
| 15525 | London | PM10 900 Highbury Ave. E. | 56 | 0.005 | 0.005 | 0.005 | 0.005 | 0.010 | 0.045 | 0.050 | 0.008 | 0.007 |
| 17550 | Embro | PM10 Earl Lantz Property | 50 | 0.005 | 0.005 | 0.005 | 0.005 | 0.015 | 0.035 | 0.035 | 0.008 | 0.007 |
| 22304 | Nanticoke | PM10 Walpole Ps Sandusk Rd | 59 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.010 | 0.010 | 0.005 | 0.005 |
| 26365 | Elmira | PM10 Mill St. | 9 | 0.220 | 0.248 | 0.280 | 0.316 | 0.322 | 0.329 | 0.330 | INS | INS |
| 27308 | St Catharines | PM10 71 King Street | 58 | 0.005 | 0.005 | 0.010 | 0.010 | 0.015 | 0.022 | 0.025 | 0.009 | 0.008 |
| 27352 | Thorold | PM10 185 Queen St S | 56 | 0.005 | 0.005 | 0.008 | 0.015 | 0.020 | 0.030 | 0.030 | 0.011 | 0.009 |
| 29300 | Hamilton | PM10 Elgin/Kelly St | 59 | 0.005 | 0.015 | 0.020 | 0.030 | 0.051 | 0.077 | 0.080 | 0.026 | 0.020 |
| 29302 | Hamilton | PM10 467 Beach Blvd | 53 | 0.005 | 0.008 | 0.010 | 0.020 | 0.030 | 0.040 | 0.040 | 0.015 | 0.012 |
| 29313 | Hamilton | PM10 Gertrude/Depew | 54 | 0.005 | 0.010 | 0.025 | 0.036 | 0.089 | 0.159 | 0.180 | 0.036 | 0.020 |
| 29324 | Hamilton | PM10 Buchanan Park Ps | 50 | 0.005 | 0.005 | 0.010 | 0.012 | 0.025 | 0.048 | 0.050 | 0.012 | 0.009 |
| 31127 | Toronto | PM10 Bay/Wellesley | 11 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.010 | 0.010 | INS | INS |
| 35127 | Etobicoke | PM10 Evans/Arnold | 68 | 0.005 | 0.005 | 0.010 | 0.015 | 0.025 | 0.058 | 0.075 | 0.013 | 0.010 |
| 44127 | Oakville | PM10 Bronte Rd/Woburn Cr | 57 | 0.005 | 0.005 | 0.005 | 0.010 | 0.015 | 0.022 | 0.030 | 0.008 | 0.007 |
| 46127 | Mississauga | PM10 Meadwood Park | 57 | 0.005 | 0.015 | 0.020 | 0.025 | 0.040 | 0.060 | 0.060 | 0.023 | 0.019 |
| 62135 | Fort Frances | PM10 Legion 250 Church | 54 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.012 | 0.015 | 0.005 | 0.005 |
| 63201 | Thunder Bay | PM10 615 James St S | 60 | 0.005 | 0.005 | 0.005 | 0.005 | 0.006 | 0.017 | 0.020 | 0.006 | 0.006 |
| 71342 | Sault Ste Marie | PM10 Bonney St | 49 | 0.005 | 0.005 | 0.005 | 0.005 | 0.010 | 0.018 | 0.020 | 0.006 | 0.006 |
| 71368 | Sault Ste Marie | PM10 Wm Merrifield S | 49 | 0.005 | 0.005 | 0.005 | 0.005 | 0.011 | 0.041 | 0.060 | 0.008 | 0.007 |
| 77570 | Copper Cliff | PM10 Market St | 51 | 0.010 | 0.035 | 0.075 | 0.150 | 0.420 | 1.450 | 1.800 | 0.172 | 0.068 |

## Table 27 Iron (Fe) in $PM_{10}$ Statistics (1999)

**Unit: micrograms/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith. Mean | Geom Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12507 | Windsor | PM10 Wright/Water St | 57 | 0.22 | 0.32 | 0.48 | 0.85 | 2.00 | 3.01 | 3.40 | 0.81 | 0.57 |
| 12508 | Windsor | PM10 467 University Ave W | 41 | 0.22 | 0.42 | 0.52 | 0.80 | 1.10 | 1.70 | 1.90 | 0.63 | 0.51 |
| 12513 | Windsor | PM10 3665 Wyndotte St E | 51 | 0.16 | 0.40 | 0.70 | 1.60 | 2.30 | 3.45 | 4.00 | 1.05 | 0.67 |
| 12556 | Windosr | PM10 1400 Roselawn Dr. | 54 | 0.15 | 0.22 | 0.27 | 0.40 | 0.68 | 1.74 | 1.90 | 0.38 | 0.30 |
| 12559 | Windsor | PM10 5305 Adstol Ave. | 46 | 0.08 | 0.17 | 0.29 | 0.41 | 0.68 | 0.95 | 0.96 | 0.33 | 0.25 |
| 12583 | Windsor | PM10 13765 St. Gregory's Rd. | 52 | 0.06 | 0.15 | 0.25 | 0.40 | 0.67 | 2.49 | 3.10 | 0.38 | 0.23 |
| 14550 | Sarnia | PM10 6th Line, Moore TWP | 50 | 0.04 | 0.07 | 0.10 | 0.17 | 0.28 | 0.65 | 0.66 | 0.15 | 0.11 |
| 14564 | Sarnia | PM10 Centenial Park/ Front St. | 51 | 0.06 | 0.10 | 0.20 | 0.32 | 0.52 | 1.02 | 1.10 | 0.26 | 0.18 |
| 15525 | London | PM10 900 Highbury Ave. E. | 56 | 0.06 | 0.13 | 0.28 | 0.38 | 0.54 | 1.14 | 1.30 | 0.31 | 0.21 |
| 17550 | Embro | PM10 Earl Lantz Property | 50 | 0.06 | 0.12 | 0.18 | 0.27 | 0.46 | 0.75 | 0.78 | 0.22 | 0.16 |
| 22304 | Nanticoke | PM10 Walpole Ps Sandusk Rd | 59 | 0.02 | 0.06 | 0.14 | 0.20 | 0.40 | 1.23 | 1.40 | 0.22 | 0.12 |
| 26365 | Elmira | PM10 Mill St. | 9 | 0.14 | 0.20 | 0.28 | 0.54 | 0.92 | 1.62 | 1.70 | INS | INS |
| 27308 | St Catharines | PM10 71 King Street | 58 | 0.08 | 0.18 | 0.27 | 0.34 | 0.59 | 1.03 | 1.10 | 0.31 | 0.23 |
| 27352 | Thorold | PM10 185 Queen St S | 56 | 0.18 | 0.27 | 0.33 | 0.50 | 0.93 | 1.97 | 2.90 | 0.46 | 0.34 |
| 29300 | Hamilton | PM10 Elgin/Kelly St | 59 | 0.20 | 0.33 | 0.52 | 0.83 | 2.82 | 5.13 | 6.00 | 1.00 | 0.59 |
| 29302 | Hamilton | PM10 467 Beach Blvd | 53 | 0.24 | 0.60 | 1.10 | 1.88 | 2.90 | 5.17 | 5.90 | 1.44 | 0.91 |
| 29313 | Hamilton | PM10 Gertrude/Depew | 54 | 0.55 | 1.29 | 2.25 | 3.91 | 8.56 | 12.47 | 13.00 | 3.43 | 2.20 |
| 29324 | Hamilton | PM10 Buchanan Park Ps | 50 | 0.08 | 0.14 | 0.28 | 0.55 | 1.82 | 4.08 | 5.50 | 0.63 | 0.30 |
| 31127 | Toronto | PM10 Bay/Wellesley | 11 | 0.12 | 0.14 | 0.18 | 0.24 | 0.30 | 0.32 | 0.32 | INS | INS |
| 35127 | Etobicoke | PM10 Evans/Arnold | 68 | 0.22 | 0.38 | 0.56 | 0.80 | 1.20 | 2.46 | 4.20 | 0.69 | 0.54 |
| 44127 | Oakville | PM10 Bronte Rd/Woburn Cr | 56 | 0.16 | 0.25 | 0.38 | 0.58 | 1.05 | 1.55 | 1.60 | 0.50 | 0.37 |
| 46127 | Mississauga | PM10 Meadwood Park | 57 | 0.06 | 0.14 | 0.20 | 0.32 | 0.56 | 1.00 | 1.10 | 0.27 | 0.19 |
| 62135 | Fort Frances | PM10 Legion 250 Church | 54 | 0.08 | 0.18 | 0.28 | 0.40 | 0.63 | 1.48 | 1.80 | 0.35 | 0.24 |
| 63201 | Thunder Bay | PM10 615 James St S | 60 | 0.14 | 0.26 | 0.37 | 0.70 | 1.42 | 2.98 | 3.10 | 0.65 | 0.42 |
| 71342 | Sault Ste Marie | PM10 Bonney St | 49 | 0.56 | 1.28 | 2.80 | 8.28 | 14.20 | 32.36 | 41.00 | 6.10 | 2.77 |
| 71368 | Sault Ste Marie | PM10 Wm Merrifield S | 49 | 0.12 | 0.33 | 0.46 | 0.95 | 2.02 | 6.88 | 8.90 | 0.95 | 0.48 |
| 77570 | Copper Cliff | PM10 Market St | 51 | 0.10 | 0.20 | 0.30 | 0.46 | 1.00 | 3.05 | 3.10 | 0.51 | 0.31 |

## Table 28 Manganese (Mn) in $PM_{10}$ Statistics (1999)

**Unit = micrograms/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12507 | Windsor | PM10 Wright/Water St | 57 | 0.007 | 0.012 | 0.016 | 0.025 | 0.043 | 0.068 | 0.076 | 0.022 | 0.017 |
| 12508 | Windsor | PM10 467 University Ave W | 41 | 0.008 | 0.012 | 0.018 | 0.026 | 0.038 | 0.047 | 0.052 | 0.021 | 0.017 |
| 12513 | Windsor | PM10 3665 Wyndotte St E | 51 | 0.006 | 0.018 | 0.034 | 0.094 | 0.200 | 0.295 | 0.330 | 0.075 | 0.036 |
| 12556 | Windosr | PM10 1400 Roselawn Dr. | 54 | 0.006 | 0.008 | 0.010 | 0.014 | 0.023 | 0.053 | 0.054 | 0.013 | 0.011 |
| 12559 | Windsor | PM10 5305 Adstol Ave. | 46 | 0.002 | 0.008 | 0.011 | 0.014 | 0.026 | 0.034 | 0.034 | 0.012 | 0.009 |
| 12583 | Windsor | PM10 13765 St. Gregory's Rd. | 52 | 0.002 | 0.008 | 0.010 | 0.013 | 0.024 | 0.078 | 0.094 | 0.013 | 0.009 |
| 14550 | Sarnia | PM10 6th Line, Moore TWP | 50 | 0.002 | 0.004 | 0.004 | 0.007 | 0.012 | 0.014 | 0.014 | 0.006 | 0.005 |
| 14564 | Sarnia | PM10 Centenial Park/ Front St. | 51 | 0.002 | 0.006 | 0.006 | 0.012 | 0.018 | 0.044 | 0.062 | 0.010 | 0.007 |
| 15525 | London | PM10 900 Highbury Ave. E. | 56 | 0.003 | 0.006 | 0.012 | 0.018 | 0.032 | 0.037 | 0.038 | 0.014 | 0.010 |
| 17550 | Embro | PM10 Earl Lantz Property | 50 | 0.002 | 0.006 | 0.008 | 0.012 | 0.018 | 0.033 | 0.034 | 0.010 | 0.008 |
| 22304 | Nanticoke | PM10 Walpole Ps Sandusk Rd | 59 | 0.002 | 0.002 | 0.006 | 0.008 | 0.017 | 0.059 | 0.082 | 0.009 | 0.005 |
| 26365 | Elmira | PM10 Mill St. | 9 | 0.004 | 0.008 | 0.012 | 0.016 | 0.045 | 0.050 | 0.050 | INS | INS |
| 27308 | St Catharines | PM10 71 King Street | 58 | 0.004 | 0.010 | 0.016 | 0.020 | 0.028 | 0.045 | 0.054 | 0.017 | 0.013 |
| 27352 | Thorold | PM10 185 Queen St S | 56 | 0.008 | 0.015 | 0.020 | 0.026 | 0.035 | 0.089 | 0.130 | 0.023 | 0.018 |
| 29300 | Hamilton | PM10 Elgin/Kelly St | 59 | 0.010 | 0.019 | 0.028 | 0.047 | 0.178 | 0.440 | 0.440 | 0.064 | 0.034 |
| 29302 | Hamilton | PM10 467 Beach Blvd | 53 | 0.010 | 0.031 | 0.056 | 0.094 | 0.154 | 0.360 | 0.480 | 0.077 | 0.047 |
| 29313 | Hamilton | PM10 Gertrude/Depew | 54 | 0.032 | 0.080 | 0.135 | 0.192 | 0.499 | 0.799 | 0.820 | 0.204 | 0.130 |
| 29324 | Hamilton | PM10 Buchanan Park Ps | 50 | 0.006 | 0.008 | 0.014 | 0.027 | 0.093 | 0.232 | 0.310 | 0.034 | 0.017 |
| 31127 | Toronto | PM10 Bay/Wellesley | 11 | 0.006 | 0.008 | 0.010 | 0.014 | 0.016 | 0.018 | 0.018 | INS | INS |
| 35127 | Etobicoke | PM10 Evans/Arnold | 68 | 0.015 | 0.020 | 0.026 | 0.030 | 0.045 | 0.075 | 0.078 | 0.028 | 0.025 |
| 44127 | Oakville | PM10 Bronte Rd/Woburn Cr | 57 | 0.005 | 0.012 | 0.018 | 0.032 | 0.056 | 0.081 | 0.082 | 0.026 | 0.017 |
| 46127 | Mississauga | PM10 Meadwood Park | 57 | 0.002 | 0.006 | 0.008 | 0.016 | 0.022 | 0.038 | 0.048 | 0.011 | 0.008 |
| 62135 | Fort Frances | PM10 Legion 250 Church | 54 | 0.002 | 0.006 | 0.008 | 0.010 | 0.018 | 0.041 | 0.046 | 0.010 | 0.007 |
| 63201 | Thunder Bay | PM10 615 James St S | 60 | 0.004 | 0.008 | 0.014 | 0.022 | 0.042 | 0.076 | 0.082 | 0.019 | 0.013 |
| 71342 | Sault Ste Marie | PM10 Bonney St | 49 | 0.048 | 0.104 | 0.180 | 0.256 | 0.448 | 0.975 | 1.100 | 0.226 | 0.151 |
| 71368 | Sault Ste Marie | PM10 Wm Merrifield S | 49 | 0.008 | 0.018 | 0.032 | 0.052 | 0.110 | 0.505 | 0.750 | 0.060 | 0.031 |
| 77570 | Copper Cliff | PM10 Market St | 51 | 0.002 | 0.004 | 0.006 | 0.008 | 0.018 | 0.041 | 0.042 | 0.008 | 0.006 |

## Table 29 Sulphate ($SO_4^{2-}$) in $PM_{10}$ Statistics (1999)

**Unit =micrograms/$m^3$**

| Stn | City | Location | Number of Samples | PERCENTILES 10% | 30% | 50% | 70% | 90% | 99% | Max | Arith Mean | Geom Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12507 | Windsor | PM10 Wright/Water St | 57 | 1.5 | 2.4 | 2.9 | 4.6 | 8.1 | 18.5 | 18.7 | 4.2 | 3.2 |
| 12508 | Windsor | PM10 467 University Ave W | 41 | 1.8 | 2.7 | 3.2 | 6.3 | 11.7 | 19.2 | 19.6 | 5.5 | 4.1 |
| 12513 | Windsor | PM10 3665 Wyndotte St E | 51 | 1.4 | 2.2 | 3.0 | 4.1 | 8.7 | 20.1 | 20.6 | 4.5 | 3.4 |
| 12556 | Windosr | PM10 1400 Roselawn Dr. | 54 | 1.6 | 1.9 | 3.0 | 3.9 | 9.7 | 33.4 | 50.1 | 4.9 | 3.4 |
| 12559 | Windsor | PM10 5305 Adstol Ave. | 46 | 1.1 | 1.8 | 2.4 | 3.0 | 8.0 | 15.8 | 16.4 | 3.6 | 2.5 |
| 12583 | Windsor | PM10 13765 St. Gregory's Rd. | 52 | 1.4 | 2.2 | 3.0 | 4.2 | 8.2 | 15.1 | 20.4 | 4.0 | 3.2 |
| 14550 | Sarnia | PM10 6th Line, Moore TWP | 50 | 1.6 | 2.2 | 3.1 | 3.9 | 8.0 | 15.2 | 20.5 | 4.0 | 3.2 |
| 14564 | Sarnia | PM10 Centenial Park/ Front St. | 51 | 1.1 | 2.1 | 3.7 | 6.7 | 12.0 | 22.9 | 24.9 | 5.3 | 3.6 |
| 15525 | London | PM10 900 Highbury Ave. E. | 56 | 1.3 | 2.1 | 3.3 | 4.1 | 11.6 | 19.8 | 23.5 | 4.7 | 3.4 |
| 17550 | Embro | PM10 Earl Lantz Property | 50 | 1.5 | 2.3 | 3.3 | 5.3 | 8.7 | 17.7 | 20.7 | 4.7 | 3.5 |
| 22304 | Nanticoke | PM10 Walpole Ps Sandusk Rd | 59 | 1.1 | 2.2 | 3.4 | 4.6 | 10.4 | 18.4 | 21.2 | 4.6 | 3.3 |
| 26365 | Elmira | PM10 Mill St. | 9 | 1.9 | 2.4 | 2.6 | 3.6 | 4.4 | 4.7 | 4.7 | INS | INS |
| 27308 | St Catharines | PM10 71 King Street | 58 | 1.1 | 2.3 | 3.5 | 4.9 | 9.7 | 16.5 | 19.6 | 4.4 | 3.3 |
| 27352 | Thorold | PM10 185 Queen St S | 56 | 1.4 | 2.1 | 2.9 | 4.1 | 9.8 | 14.1 | 14.2 | 4.1 | 3.1 |
| 29300 | Hamilton | PM10 Elgin/Kelly St | 59 | 1.5 | 2.9 | 4.0 | 5.1 | 9.4 | 18.2 | 19.0 | 5.0 | 3.9 |
| 29302 | Hamilton | PM10 467 Beach Blvd | 53 | 1.3 | 3.3 | 4.1 | 5.6 | 9.4 | 12.8 | 13.4 | 4.8 | 3.9 |
| 29313 | Hamilton | PM10 Gertrude/Depew | 54 | 2.2 | 3.0 | 4.0 | 4.8 | 8.0 | 21.1 | 27.1 | 5.0 | 4.2 |
| 29324 | Hamilton | PM10 Buchanan Park Ps | 50 | 1.2 | 2.2 | 3.4 | 4.8 | 8.6 | 15.5 | 16.4 | 4.3 | 3.3 |
| 31127 | Toronto | PM10 Bay/Wellesley | 11 | 0.8 | 1.7 | 1.9 | 2.3 | 2.9 | 3.2 | 3.2 | INS | INS |
| 35127 | Etobicoke | PM10 Evans/Arnold | 68 | 1.1 | 1.7 | 3.1 | 4.8 | 10.1 | 16.1 | 17.8 | 4.4 | 2.9 |
| 44127 | Oakville | PM10 Bronte Rd/Woburn Cr | 57 | 1.2 | 2.2 | 3.5 | 4.5 | 8.0 | 15.7 | 16.5 | 4.2 | 3.2 |
| 46127 | Mississauga | PM10 Meadwood Park | 57 | 1.2 | 2.0 | 3.2 | 5.0 | 8.8 | 15.1 | 15.6 | 4.3 | 3.2 |
| 62135 | Fort Frances | PM10 Legion 250 Church | 54 | 0.5 | 1.0 | 1.4 | 1.9 | 2.9 | 6.7 | 8.3 | 1.7 | 1.3 |
| 63201 | Thunder Bay | PM10 615 James St S | 60 | 0.5 | 0.9 | 1.4 | 2.1 | 4.0 | 8.0 | 8.4 | 1.9 | 1.4 |
| 71342 | Sault Ste Marie | PM10 Bonney St | 49 | 0.8 | 1.9 | 3.3 | 6.7 | 12.9 | 24.9 | 29.9 | 5.5 | 3.2 |
| 71368 | Sault Ste Marie | PM10 Wm Merrifield S | 49 | 0.8 | 1.3 | 2.2 | 3.1 | 6.8 | 11.6 | 12.8 | 3.0 | 2.1 |
| 77570 | Copper Cliff | PM10 Market St | 51 | 0.7 | 1.2 | 2.1 | 3.1 | 5.2 | 14.4 | 14.5 | 3.0 | 2.0 |

## TABLE 30 10-YEAR TREND FOR $SO_2$

**Annual Mean (ppb)**

**$SO_2$ annual AAQC = 20 ppb**

| City | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| BURLINGTON | 6.0 | 3.0 | 6.0 | 6.0 | 4.0 | 2.0 | 4.0 | 5.1 | 3.2 | 4.9 |
| CORNWALL | 5.0 | 5.0 | 5.0 | 7.0 | 12.0 | 5.0 | 5.0 | 3.9 | 5.5 | 3.9 |
| ETOBICOKE | 6.0 | 6.0 | 8.0 | 5.0 | 4.0 | 3.0 | 4.0 | 4.9 | 4.1 | n/a |
| HAMILTON | 7.0 | 7.0 | 7.0 | 6.0 | 5.0 | 8.0 | 9.0 | 5.8 | 6.3 | 6.6 |
| KITCHENER * | n/a | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.1 | 3.0 | 3.4 |
| LONDON # | 4.0 | 5.0 | 4.0 | 3.0 | 4.0 | 2.0 | 3.0 | 2.5 | 3.2 | 4.9 |
| LONG POINT | 4.0 | 4.0 | 5.0 | 2.0 | 3.0 | 2.0 | 3.0 | 2.7 | 3.0 | 3.7 |
| MISSISSAUGA | 4.0 | 5.0 | 6.0 | 3.0 | 3.0 | 2.0 | n/a | n/a | 5.1 | 4.7 |
| NORTH YORK ^ | 2.0 | 2.0 | 3.0 | 4.0 | 3.0 | 2.0 | 5.0 | 4.4 | 4.2 | 5.0 |
| OAKVILLE | 5.0 | 5.0 | 4.0 | 5.0 | 4.0 | 2.0 | 5.0 | 4.8 | 5.1 | 4.0 |
| OSHAWA | 4.0 | 4.0 | 4.0 | 3.0 | 2.0 | 2.0 | 5.0 | 4.6 | 4.8 | 5.1 |
| OTTAWA | 2.0 | 3.0 | 2.0 | 2.0 | 1.0 | 1.0 | 5.0 | 6.3 | 3.4 | 4.2 |
| SARNIA | 12.0 | 9.0 | 9.0 | 10.0 | 9.0 | 6.0 | 7.0 | 8.5 | 10.3 | 11.8 |
| SCARBOROUGH | 6.0 | 4.0 | 3.0 | 3.0 | 3.0 | 4.0 | 6.0 | 5.2 | 4.2 | 4.9 |
| SIMCOE | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.2 | 3.8 | 3.7 |
| ST CATHARINES | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | 5.0 | 6.0 | 5.8 | 4.0 | 2.2 |
| STOUFFVILLE | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 3.3 | n/a | n/a |
| SUDBURY | 8.0 | 5.0 | 4.0 | 4.0 | 3.0 | 4.0 | 5.0 | 3.5 | 5.2 | 3.0 |
| THUNDER BAY | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 |
| TIVERTON | 1.0 | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | 2.0 | 2.0 | 2.7 | n/a |
| TORONTO | 6.0 | 5.0 | 8.0 | 7.0 | 3.0 | 3.0 | 5.0 | 5.3 | 4.0 | n/a |
| WINDSOR | 7.0 | 7.0 | 6.0 | 6.0 | 6.0 | 5.0 | 10.0 | 6.7 | 7.4 | 6.7 |
| COMPOSITE MEAN | 4.8 | 4.3 | 4.5 | 4.0 | 3.8 | 3.0 | 4.7 | 4.4 | 4.4 | 4.6 |

* Site changed location from Edna/Frederick St (26029) to West Ave/Homewood (26060) in 1990.

# Site change from King/Rectory (15001) to 900 Highbury Ave (15025) in 1995

^ Site changed location from Science Centre (34002) to North York Central (34020) in 1992.

n/a - data not available

## TABLE 31 10-YEAR TREND FOR SP (as measured by COH)

**Annual Mean (COH units/1000ft)**

**COH annual AAQC = 0.5 COH unit**

| City | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| CORNWALL | 0.19 | 0.17 | 0.19 | 0.22 | 0.19 | 0.22 | 0.26 | 0.15 | 0.09 | 0.13 |
| ETOBICOKE | 0.52 | 0.50 | 0.46 | 0.51 | 0.38 | 0.33 | 0.29 | 0.26 | 0.34 | 0.33 |
| HAMILTON | 0.42 | 0.41 | 0.45 | 0.48 | 0.47 | 0.39 | 0.43 | 0.33 | 0.33 | 0.25 |
| LONDON * | 0.28 | 0.25 | 0.24 | 0.25 | 0.25 | 0.20 | 0.21 | 0.17 | 0.18 | 0.14 |
| NORTH YORK # | 0.30 | 0.33 | 0.31 | 0.35 | 0.40 | 0.38 | 0.37 | 0.28 | 0.29 | n/a |
| OSHAWA | 0.37 | 0.35 | 0.31 | 0.36 | 0.37 | 0.23 | 0.26 | 0.24 | n/a | n/a |
| OTTAWA | 0.35 | 0.25 | 0.28 | 0.24 | 0.22 | 0.18 | 0.18 | 0.16 | 0.17 | n/a |
| SARNIA | 0.28 | 0.24 | 0.22 | 0.20 | 0.20 | 0.18 | 0.17 | 0.18 | 0.19 | 0.18 |
| SCARBOROUGH | 0.36 | 0.34 | 0.30 | 0.30 | 0.34 | 0.32 | 0.28 | 0.28 | n/a | n/a |
| SUDBURY | 0.12 | 0.17 | 0.17 | 0.21 | 0.19 | 0.14 | 0.15 | 0.12 | 0.09 | 0.11 |
| ST CATHARINES | 0.25 | 0.25 | 0.26 | 0.27 | 0.25 | 0.24 | 0.24 | 0.20 | 0.21 | 0.20 |
| TORONTO | 0.38 | 0.40 | 0.39 | 0.42 | 0.38 | 0.38 | 0.44 | 0.35 | n/a | n/a |
| WINDSOR | 0.40 | 0.30 | 0.34 | 0.36 | 0.28 | 0.31 | 0.26 | 0.15 | 0.20 | 0.19 |
| COMPOSITE MEAN | 0.32 | 0.30 | 0.30 | 0.32 | 0.30 | 0.27 | 0.27 | 0.22 | 0.21 | 0.19 |

* Site changed from King/Rectory (15001) to 900 Highbury Ave (15025)

# Site changed location from Science Centre (34002) to North York Central (34020) in 1992.

n/a - data not available

## TABLE 32 10-YEAR TREND FOR TRS

**Annual Mean (ppb)**

| City | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| CORNWALL | 3.4 | 2.9 | 2.3 | 1.8 | 2.5 | 1.3 | 1.2 | 2.0 | 1.2 | 0.90 |
| FORT FRANCES | 5.5 | 4.3 | 4.2 | 4.2 | 2.4 | 2.5 | 2.7 | 2.6 | 1.4 | 1.2 |
| HAMILTON | 0.9 | 0.8 | 0.6 | 0.7 | 1.1 | 1.2 | 1.4 | 1.0 | 0.7 | 0.6 |
| MARATHON | 1.1 | 0.9 | 0.5 | 0.7 | 0.9 | 0.5 | 0.4 | 0.2 | 0.1 | 0.1 |
| OAKVILLE | 1.3 | 1.6 | 0.5 | 1.0 | 1.3 | 0.3 | 1.3 | 1.3 | 1.1 | 1.4 |
| RED ROCK | 1.7 | 1.4 | 2.0 | 1.9 | 3.2 | 1.1 | 1.2 | 1.6 | 2.8 | 3.8 |
| TERRACE BAY | 1.3 | 1.3 | 1.7 | 1.7 | 1.1 | 1.7 | 1.3 | 1.0 | 1.0 | 0.9 |
| TIVERTON | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.1 | 0.2 | n/a |
| THUNDER BAY | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.8 | 1.1 | 1.3 | 1.2 |
| COMPOSITE MEAN | 1.7 | 1.5 | 1.1 | 1.3 | 1.4 | 1.0 | 1.2 | 1.2 | 1.1 | 1.3 |

## TABLE 33 10-YEAR TREND FOR CO

**Annual Mean (ppm)**

| CITY | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| CORNWALL | 0.6 | 0.8 | 0.5 | 0.8 | 0.5 | 0.6 | 0.6 | 1.1 | 0.3 | 0.4 |
| ETOBICOKE | 0.8 | 0.8 | 0.6 | 0.7 | 0.7 | 0.8 | 0.7 | 1.0 | 1.0 | 1.0 |
| HAMILTON | 1.2 | 1.1 | 1.2 | 1.1 | 0.8 | 0.6 | 1.0 | 0.7 | 1.1 | 0.8 |
| KITCHENER * | n/a | 0.6 | 0.5 | 0.4 | 0.3 | 0.3 | 0.4 | 0.2 | 0.3 | 0.4 |
| LONDON # | 0.6 | 0.7 | 0.7 | 0.6 | 0.5 | 0.1 | 0.0 | 0.3 | 0.1 | 0.3 |
| NORTH YORK ^ | 1.0 | 0.7 | 1.0 | 1.1 | 0.9 | 0.5 | 0.9 | 0.7 | 1.0 | 0.8 |
| OAKVILLE | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.7 | 0.3 | 0.2 | 0.2 |
| OSHAWA | 0.9 | 0.8 | 0.9 | 0.9 | 1.0 | 0.8 | 0.6 | 0.4 | 1.0 | 0.7 |
| OTTAWA | 0.7 | 1.0 | 1.1 | 0.9 | 0.8 | 0.6 | 0.7 | 0.4 | 1.1 | 0.8 |
| SARNIA | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 |
| SCARBOROUGH | 1.2 | 1.2 | 1.0 | 0.8 | 1.0 | 1.0 | 1.1 | 0.6 | 0.9 | 0.8 |
| ST CATHARINES | 0.9 | 1.0 | 0.7 | 0.5 | 0.4 | 0.2 | 0.3 | 0.1 | 0.4 | 0.2 |
| SUDBURY | 0.5 | 0.3 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| TORONTO | 1.1 | 1.1 | 1.0 | 1.1 | 1.0 | 0.7 | 1.3 | 1.2 | 1.1 | n/a |
| WINDSOR | 1.2 | 1.0 | 0.9 | 0.8 | 1.0 | 0.9 | 0.8 | 0.6 | 0.7 | 0.6 |
| COMPOSITE MEAN | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.6 | 0.5 | 0.6 | 0.5 |

* Site changed location from Edna/Frederick St (26029) to West Ave/Homewood (26060) in 1990.

# Site changed location from King/Rectory to 900 Highbury Ave in 1995

^ Site changed location from Science Centre (34002) to North York Central (34020) in 1992.

n/a - data not available

## TABLE 34 10-YEAR TREND FOR $NO_2$

**Annual Mean (ppb)**

| City | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| CORNWALL | 8.0 | 6.0 | 10.0 | 8.0 | 9.0 | 8.0 | 12.0 | 8.0 | n/a | 9.0 |
| ETOBICOKE | 26.0 | 25.0 | 26.0 | 26.0 | 27.0 | 25.0 | 25.0 | 26.7 | 26.2 | 24.7 |
| HAMILTON | 22.0 | 22.0 | 19.0 | 22.0 | 22.0 | 19.0 | 22.0 | 18.6 | 22.4 | 21.6 |
| KITCHENER * | n/a | 13.0 | 15.0 | 14.0 | 14.0 | 11.0 | 13.0 | 13.7 | 16.5 | 14.0 |
| LONDON # | 21.0 | 19.0 | 18.0 | 20.0 | 23.0 | 20.0 | 18.0 | 18.0 | 17.7 | 19.4 |
| NORTH YORK ^ | 28.0 | 29.0 | 24.0 | 21.0 | 20.0 | 18.0 | 22.0 | 20.2 | 23.4 | 24.3 |
| OAKVILLE | 17.0 | 17.0 | 16.0 | 19.0 | 17.0 | 17.0 | 20.0 | 20.8 | 17.1 | 17.2 |
| OSHAWA | 19.0 | 18.0 | 18.0 | 19.0 | 18.0 | 20.0 | 19.0 | 18.6 | 20.0 | 21.5 |
| OTTAWA | 16.0 | 20.0 | 17.0 | 19.0 | 19.0 | 16.0 | 13.0 | 12.5 | 12.4 | 12.2 |
| SARNIA | 21.0 | 19.0 | 20.0 | 16.0 | 18.0 | 17.0 | 16.0 | 16.9 | 18.0 | 16.7 |
| SCARBOROUGH | 25.0 | 24.0 | 19.0 | 19.0 | 22.0 | 25.0 | 23.0 | 23.4 | 25.5 | 24.6 |
| ST CATHARINES | 16.0 | 16.0 | 12.0 | 17.0 | 17.0 | 14.0 | 16.0 | 13.8 | 15.7 | 16.2 |
| SUDBURY | 9.0 | 9.0 | 9.0 | 10.0 | 11.0 | 12.0 | 8.0 | 7.4 | 6.0 | 7.7 |
| TORONTO | 25.0 | 29.0 | 27.0 | 29.0 | 30.0 | 30.0 | 34.0 | 31.7 | 27.7 | 26.9 |
| WINDSOR | 25.0 | 25.0 | 25.0 | 26.0 | 28.0 | 25.0 | 26.0 | 23.8 | 23.8 | 22.9 |
| COMPOSITE MEAN | 19.9 | 19.4 | 18.3 | 19.0 | 19.7 | 18.5 | 19.1 | 18.3 | 19.5 | 18.6 |

* Site changed location from Edna/Frederick St (26029) to West Ave/Homewood (26060) in 1990.

# Site changed location from King/Rectory to 900 Highbury Ave in 1995

^ Site changed location from Science Centre (34002) to North York Central (34020) in 1992.

n/a - data not available

## TABLE 35 10-YEAR TREND FOR NO

**Annual Mean (ppb)**

| CITY | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| CORNWALL | 8.0 | 6.0 | 8.0 | 7.0 | 6.0 | 6.0 | 8.0 | 6.3 | n/a | 5.9 |
| ETOBICOKE | 23.0 | 19.0 | 25.0 | 22.0 | 23.0 | 19.0 | 22.0 | 18.6 | 17.9 | 20.7 |
| HAMILTON | 12.0 | 11.0 | 15.0 | 17.0 | 18.0 | 16.0 | 15.0 | 10.8 | 12.6 | 12.0 |
| KITCHENER * | n/a | 5.0 | 6.0 | 6.0 | 8.0 | 7.0 | 7.0 | 5.5 | 6.9 | 6.6 |
| LONDON # | 16.0 | 11.0 | 13.0 | 13.0 | 18.0 | 15.0 | 10.0 | 7.6 | 9.1 | 8.5 |
| NORTH YORK ^ | 38.0 | 20.0 | 21.0 | 16.0 | 17.0 | 18.0 | 17.0 | 16.3 | 16.5 | 16.5 |
| OAKVILLE | 15.0 | 11.0 | 13.0 | 16.0 | 15.0 | 15.0 | 16.0 | 14.9 | 15.8 | 13.0 |
| OSHAWA | 20.0 | 14.0 | 14.0 | 17.0 | 19.0 | 18.0 | 15.0 | 16.4 | 15.6 | 15.1 |
| OTTAWA | 9.0 | 9.0 | 11.0 | 12.0 | 11.0 | 7.0 | 8.0 | 7.0 | 7.9 | 14.8 |
| SARNIA | 7.0 | 6.0 | 7.0 | 7.0 | 9.0 | 6.0 | 7.0 | 7.0 | 6.9 | 7.1 |
| SCARBOROUGH | 27.0 | 26.0 | 25.0 | 24.0 | 26.0 | 24.0 | 23.0 | 24.9 | 23.2 | 20.1 |
| ST CATHARINES | 11.0 | 8.0 | 14.0 | 12.0 | 10.0 | 10.0 | 13.0 | 10.3 | 16.3 | 11.7 |
| SUDBURY | 5.0 | 5.0 | 4.0 | 4.0 | 5.0 | 6.0 | 6.0 | 4.9 | 3.7 | 5.0 |
| TORONTO | 21.0 | n/a | 25.0 | 27.0 | 25.0 | 23.0 | 42.0 | 32.9 | 24.3 | 15.8 |
| WINDSOR | 16.0 | 19.0 | 18.0 | 17.0 | 17.0 | 15.0 | 16.0 | 15.9 | 16.3 | 13.3 |
| COMPOSITE MEAN | 16.3 | 12.1 | 14.6 | 14.5 | 15.1 | 13.7 | 15.0 | 13.3 | 13.8 | 12.4 |

* Site changed location from Edna/Frederick St (26029) to West Ave/Homewood (26060) in 1990.

# Site change location from King/Rectory (15001) to 900 Highbury Ave (15025) in 1995

^ Site changed location from Science Centre (34002) to North York Central (34020) in 1992.

n/a - data not available

## TABLE 36 10-YEAR TREND FOR NOx

**Annual Mean (ppb)**

| City | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| CORNWALL | 18.0 | 16.0 | 19.0 | 17.0 | 17.0 | 16.0 | 17.0 | 14.5 | n/a | 14.7 |
| ETOBICOKE | 50.0 | 44.0 | 51.0 | 49.0 | 49.0 | 45.0 | 47.0 | 45.2 | 43.7 | 45.4 |
| HAMILTON | 35.0 | 33.0 | 33.0 | 39.0 | 40.0 | 35.0 | 37.0 | 29.5 | 34.7 | 34.0 |
| KITCHENER* | 39.0 | 21.0 | 22.0 | 21.0 | 23.0 | 20.0 | 20.0 | 19.2 | 23.9 | 20.5 |
| LONDON # | 34.0 | 31.0 | 34.0 | 35.0 | 38.0 | 32.0 | 28.0 | 24.4 | 25.8 | 25.9 |
| NORTH YORK ^ | 66.0 | 49.0 | 45.0 | 37.0 | 38.0 | 36.0 | 39.0 | 36.7 | 39.9 | 40.7 |
| OAKVILLE | 31.0 | 28.0 | 30.0 | 35.0 | 34.0 | 32.0 | 33.0 | 32.8 | 30.0 | 29.6 |
| OSHAWA | 40.0 | 32.0 | 33.0 | 36.0 | 37.0 | 36.0 | 35.0 | 34.9 | 35.1 | 35.8 |
| OTTAWA | 25.0 | 29.0 | 28.0 | 29.0 | 28.0 | 22.0 | 25.0 | 19.6 | 22.8 | 27.5 |
| SARNIA | 29.0 | 26.0 | 26.0 | 23.0 | 28.0 | 23.0 | 23.0 | 24.9 | 25.1 | 23.5 |
| SCARBOROUGH | 51.0 | 50.0 | 46.0 | 46.0 | 50.0 | 49.0 | 45.0 | 47.5 | 48.3 | 44.9 |
| ST CATHARINES | 27.0 | 24.0 | 27.0 | 30.0 | 28.0 | 25.0 | 29.0 | 24.5 | 31.7 | 24.8 |
| SUDBURY | 14.0 | 14.0 | 14.0 | 16.0 | 17.0 | 17.0 | 14.0 | 12.5 | 9.4 | 12.7 |
| TORONTO | 46.0 | 54.0 | 52.0 | 55.0 | 54.0 | 55.0 | 76.0 | 64.3 | 51.6 | 41.9 |
| WINDSOR | 41.0 | 42.0 | 42.0 | 42.0 | 42.0 | 38.0 | 39.0 | 39.3 | 38.5 | 37.0 |
| COMPOSITE MEAN | 36.4 | 32.9 | 33.5 | 34.0 | 34.9 | 32.1 | 33.8 | 31.3 | 32.9 | 30.6 |

* Site changed location from Edna/Frederick St (26029) to West Ave/Homewood (26060) in 1990.

# Site change from King/Rectory (15001) to 900 Highbury Ave (15025) in 1995

^ Site changed location from Science Centre (34002) to North York Central (34020) in 1992.

n/a - data not available

## TABLE 37 10-YEAR TREND FOR $O_3$

**Annual Mean (ppb)**

| CITY | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| CORNWALL | 21.2 | 20.7 | 20.8 | 21.6 | 21.7 | 23.5 | 21.0 | 22.8 | 24.2 | 25.80 |
| ETOBICOKE | 16.4 | 19.0 | 15.4 | 16.0 | 17.4 | 16.3 | 17.1 | 19.4 | 20.2 | n/a |
| GRAND BEND | 27.4 | n/a | 29.7 | 31.3 | 30.2 | 31.3 | 31.9 | 31.2 | 31.2 | 32.5 |
| HAMILTON | 17.6 | 19.9 | 16.9 | 16.9 | 17.0 | 18.0 | 17.3 | 18.1 | 19.1 | 19.5 |
| KITCHENER * | n/a | 27.2 | 22.7 | 23.2 | 24.4 | 25.1 | 23.8 | 23.4 | 25.4 | 25.2 |
| LONDON # | 22.1 | 22.7 | 20.3 | 22.8 | 23.1 | 21.7 | 23.1 | 22.8 | 25.1 | 25.8 |
| LONG POINT | 33.0 | 33.9 | 32.3 | 31.2 | 32.2 | 31.0 | 34.4 | 35.2 | 32.9 | 35.6 |
| MANDAUMIN | 23.7 | 28.1 | 23.5 | 24.5 | 24.6 | 24.0 | 23.4 | 27.9 | 29.9 | 29.0 |
| MERLIN | 26.0 | 28.4 | 24.3 | 23.7 | 24.2 | 28.0 | 28.6 | 27.0 | 28.4 | 27.2 |
| MISSISSAUGA | 17.8 | 18.6 | 15.6 | 16.1 | 19.5 | 19.2 | 19.4 | 20.0 | 20.8 | 22.2 |
| OAKVILLE | 22.2 | 22.1 | 19.3 | 21.0 | 22.5 | 20.4 | 21.1 | 20.8 | 21.8 | 22.4 |
| OSHAWA | 18.8 | 22.6 | 20.3 | 21.4 | 23.8 | 22.7 | 21.9 | 23.2 | 23.1 | 25.0 |
| OTTAWA | 21.5 | 20.8 | 17.4 | 18.1 | 19.7 | 20.9 | 18.9 | 20.6 | 19.1 | 21.2 |
| SARNIA | 21.4 | 23.4 | 21.3 | 22.6 | 21.4 | 22.2 | 25.2 | 24.5 | 26.1 | 26.5 |
| SCARBOROUGH | 17.6 | 19.1 | 14.3 | 17.0 | 18.2 | 19.3 | 18.9 | 18.0 | 20.6 | 21.5 |
| SIMCOE | 26.3 | 29.1 | 25.1 | 27.8 | 30.2 | 30.7 | 29.9 | 28.6 | 31.1 | 31.3 |
| ST CATHARINES | 23.8 | 25.0 | 19.3 | 23.9 | 23.6 | 20.5 | 20.3 | 20.9 | 20.8 | 21.7 |
| STOUFFVILLE | 24.9 | 25.0 | 23.0 | 23.0 | 25.3 | 24.4 | 26.4 | 30.1 | 31.4 | 31.2 |
| SUDBURY | 27.2 | 27.0 | 25.4 | 25.9 | 27.1 | 29.7 | 28.1 | 28.0 | 29.1 | 30.7 |
| TIVERTON | 31.3 | 34.2 | 33.4 | 32.2 | 31.7 | 31.6 | 32.0 | 32.5 | 32.2 | n/a |
| TORONTO | 15.7 | 18.0 | 12.5 | 14.6 | 16.9 | 16.6 | 12.2 | 13.7 | 17.8 | 20.2 |
| WINDSOR | 17.1 | 17.6 | 15.1 | 17.1 | 18.0 | 18.3 | 20.4 | 20.7 | 21.4 | 21.7 |
| COMPOSITE MEAN | 21.8 | 24.3 | 21.2 | 23.1 | 23.9 | 23.4 | 23.4 | 24.1 | 25.1 | 25.8 |

* Site changed location from Edna/Frederick St (26029) to West Ave/Homewood (26060) in 1990.

# Site change from King/Rectory (15001) to 900 Highbury Ave (15025) in 1995

n/a - data not available

## Table 38 Stations Used in Gaseous Trends

| City | Station# (Sampling Period) |
|---|---|
| Burlington | 44008 (1990 - 1999) |
| Cornwall | 56051 (1990 - 1999) |
| Etobicoke | 35003 (1990 - 1999) |
| Fort Frances | 62030 (1990 - 1999) |
| Hamilton | 29000 (1990 - 1999) |
| Grand Bend | 10001 (1990);15020 (1991-1999) |
| Kitchener | 26029 (1990);26060 (1991-1999) |
| London | 15001 (1990 - 1995);15025 (1996 - 1999) |
| Long Point | 22901 (1990 - 1999) |
| Mandaumin | 14118 (1990 - 1999) |
| Merlin | 13021 (1990 - 1999) |
| Mississauga | 46110 (1990 - 1999) |
| Niagara Falls | 27056 (1990 - 1992);27072 (1993-1999) |
| North Bay | 75010 (1990 - 1999) |
| North York | 34002 (1990 - 1991);34020 (1992-1999) |
| Oakville | 44015 (1990 - 1999) |
| Oshawa | 45025 (1990 - 1999) |
| Ottawa | 51001 (1990 - 1999) |
| Peterborough | 59006 (1990 - 1999) |
| Sarnia | 14064 (1990 - 1999) |
| Scarborough | 33003 (1990 - 1999) |
| Simcoe | 22071 (1990 - 1999) |
| St Catharines | 27067 (1990 - 1999) |
| Stouffville | 48002 (1990 - 1999) |
| Sudbury | 77203 (1990 - 1999) |
| Thunder Bay | 63200 (1990 - 1999) |
| Tiverton | 18007 (1990 - 1999) |
| Toronto | 31104 (1990);31103 (1991 - 1999) |
| Windsor | 12008 (1990 - 1999) |

## Table 39 VOC Annual Statistics at Egbert (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 218 | 0.316 | 0.341 | 0.378 | 0.400 | 0.421 | 0.480 | 0.258 | 0.373 | 0.040 |
| 1,2,3-Trimethylbenzene | 218 | 0.000 | 0.000 | 0.017 | 0.028 | 0.051 | 0.172 | 0.000 | 0.022 | 0.026 |
| 1,2,4-Trimethylbenzene | 218 | 0.015 | 0.026 | 0.037 | 0.074 | 0.178 | 0.720 | 0.000 | 0.073 | 0.096 |
| 1,3,5-Trimethylbenzene | 218 | 0.000 | 0.011 | 0.016 | 0.025 | 0.045 | 0.216 | 0.000 | 0.023 | 0.029 |
| 1,3-Butadiene | 218 | 0.000 | 0.000 | 0.016 | 0.029 | 0.040 | 0.145 | 0.000 | 0.018 | 0.021 |
| 1,3-Diethylbenzene | 218 | 0.000 | 0.000 | 0.000 | 0.016 | 0.023 | 0.047 | 0.000 | 0.008 | 0.011 |
| 1,4-Dichlorobenzene | 218 | 0.015 | 0.023 | 0.027 | 0.035 | 0.052 | 0.613 | 0.000 | 0.034 | 0.043 |
| 1,4-Diethylbenzene | 218 | 0.000 | 0.000 | 0.025 | 0.040 | 0.061 | 0.130 | 0.000 | 0.026 | 0.028 |
| 1-Butene/Isobutene | 218 | 0.061 | 0.090 | 0.117 | 0.160 | 0.214 | 0.597 | 0.000 | 0.135 | 0.075 |
| 1-Hexene | 218 | 0.000 | 0.036 | 0.059 | 0.077 | 0.116 | 0.273 | 0.000 | 0.063 | 0.052 |
| 1-Pentene | 218 | 0.000 | 0.035 | 0.044 | 0.058 | 0.072 | 0.259 | 0.000 | 0.048 | 0.030 |
| 2,2,4-Trimethylpentane | 218 | 0.024 | 0.040 | 0.070 | 0.130 | 0.229 | 0.540 | 0.000 | 0.104 | 0.094 |
| 2,2,5-Trimethylhexane | 218 | 0.000 | 0.000 | 0.000 | 0.016 | 0.025 | 0.053 | 0.000 | 0.009 | 0.012 |
| 2,2-Dimethylbutane | 218 | 0.022 | 0.047 | 0.062 | 0.089 | 0.118 | 0.271 | 0.000 | 0.071 | 0.039 |
| 2,2-Dimethylhexane | 218 | 0.000 | 0.000 | 0.000 | 0.014 | 0.021 | 0.036 | 0.000 | 0.006 | 0.009 |
| 2,2-Dimethylpentane | 218 | 0.000 | 0.000 | 0.000 | 0.024 | 0.037 | 0.069 | 0.000 | 0.013 | 0.017 |
| 2,3,4-Trimethylpentane | 218 | 0.000 | 0.000 | 0.000 | 0.049 | 0.091 | 0.199 | 0.000 | 0.030 | 0.043 |
| 2,3-Dimethylbutane | 218 | 0.000 | 0.000 | 0.039 | 0.074 | 0.130 | 0.335 | 0.000 | 0.053 | 0.058 |
| 2,3-Dimethylpentane | 218 | 0.000 | 0.000 | 0.043 | 0.072 | 0.120 | 0.214 | 0.000 | 0.048 | 0.050 |
| 2,4-Dimethylhexane | 218 | 0.000 | 0.000 | 0.000 | 0.036 | 0.055 | 0.123 | 0.000 | 0.020 | 0.027 |
| 2,4-Dimethylpentane | 218 | 0.000 | 0.000 | 0.000 | 0.046 | 0.070 | 0.163 | 0.000 | 0.023 | 0.033 |
| 2,5-Dimethylhexane | 218 | 0.000 | 0.000 | 0.000 | 0.027 | 0.043 | 0.102 | 0.000 | 0.015 | 0.022 |
| 2-Ethyltoluene | 218 | 0.000 | 0.015 | 0.020 | 0.037 | 0.068 | 0.203 | 0.000 | 0.031 | 0.031 |
| 2-Methyl-1-butene | 218 | 0.000 | 0.000 | 0.019 | 0.030 | 0.047 | 0.111 | 0.000 | 0.021 | 0.023 |
| 2-Methyl-2-butene | 218 | 0.000 | 0.020 | 0.030 | 0.036 | 0.046 | 0.100 | 0.000 | 0.027 | 0.018 |
| 2-Methylheptane | 218 | 0.000 | 0.000 | 0.000 | 0.050 | 0.089 | 0.273 | 0.000 | 0.032 | 0.052 |
| 2-Methylhexane | 218 | 0.000 | 0.000 | 0.053 | 0.101 | 0.191 | 0.416 | 0.000 | 0.071 | 0.086 |
| 2-Methylpentane | 218 | 0.040 | 0.081 | 0.141 | 0.278 | 0.455 | 1.339 | 0.000 | 0.216 | 0.209 |
| 3-Ethyltoluene | 218 | 0.010 | 0.016 | 0.024 | 0.060 | 0.125 | 0.457 | 0.000 | 0.052 | 0.070 |
| 3-Methyl-1-pentene | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.026 | 0.050 | 0.000 | 0.006 | 0.012 |
| 3-Methylheptane | 218 | 0.000 | 0.000 | 0.000 | 0.042 | 0.084 | 0.221 | 0.000 | 0.027 | 0.045 |
| 3-Methylhexane | 218 | 0.000 | 0.000 | 0.050 | 0.115 | 0.227 | 0.502 | 0.000 | 0.078 | 0.100 |
| 3-Methylpentane | 218 | 0.033 | 0.059 | 0.099 | 0.204 | 0.330 | 0.745 | 0.000 | 0.154 | 0.141 |
| 4-Ethyltoluene | 218 | 0.013 | 0.020 | 0.026 | 0.047 | 0.072 | 0.239 | 0.000 | 0.039 | 0.034 |
| 4-Methyl-1-pentene | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.029 | 0.057 | 0.000 | 0.007 | 0.014 |
| 4-Methylheptane | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.033 | 0.090 | 0.000 | 0.008 | 0.018 |
| Acetaldehyde | 140 | 0.452 | 0.744 | 1.087 | 1.585 | 2.096 | 6.698 | 0.104 | 1.266 | 0.789 |

## Table 39 VOC Annual Statistics at Egbert (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| Acetone | 140 | 1.181 | 2.353 | 3.750 | 5.177 | 6.211 | 11.749 | 0.000 | 3.855 | 1.952 |
| Acetylene | 218 | 0.177 | 0.323 | 0.568 | 1.029 | 1.524 | 3.571 | 0.139 | 0.741 | 0.560 |
| Benzene | 218 | 0.118 | 0.203 | 0.348 | 0.552 | 0.835 | 1.976 | 0.066 | 0.424 | 0.293 |
| Butane | 218 | 0.103 | 0.241 | 0.528 | 1.208 | 2.218 | 5.539 | 0.058 | 0.900 | 0.975 |
| Carbontetrachloride | 218 | 0.524 | 0.580 | 0.616 | 0.684 | 0.730 | 0.826 | 0.282 | 0.628 | 0.075 |
| Chloroform | 218 | 0.071 | 0.084 | 0.093 | 0.104 | 0.118 | 0.182 | 0.053 | 0.095 | 0.017 |
| Chloromethane | 218 | 0.806 | 1.025 | 1.129 | 1.243 | 1.341 | 1.649 | 0.707 | 1.131 | 0.176 |
| cis-1,2-Dimethylcyclohe | 218 | 0.000 | 0.000 | 0.000 | 0.022 | 0.031 | 0.049 | 0.000 | 0.009 | 0.014 |
| cis-1,3-Dimethylcyclohe | 218 | 0.000 | 0.000 | 0.000 | 0.020 | 0.039 | 0.170 | 0.000 | 0.016 | 0.028 |
| cis-1,4/t-1,3-Dimethylcy | 218 | 0.000 | 0.000 | 0.000 | 0.009 | 0.019 | 0.065 | 0.000 | 0.006 | 0.011 |
| cis-2-Butene | 218 | 0.000 | 0.000 | 0.015 | 0.025 | 0.037 | 0.098 | 0.000 | 0.016 | 0.018 |
| cis-2-Hexene | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.032 | 0.000 | 0.001 | 0.003 |
| cis-2-Pentene | 218 | 0.000 | 0.000 | 0.031 | 0.038 | 0.049 | 0.083 | 0.000 | 0.027 | 0.020 |
| cis-3-Methyl-2-pentene | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.004 | 0.034 | 0.000 | 0.002 | 0.007 |
| cis-4-Methyl-2-pentene | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Cyclohexane | 218 | 0.000 | 0.000 | 0.024 | 0.065 | 0.126 | 6.420 | 0.000 | 0.125 | 0.643 |
| Cyclopentane | 218 | 0.000 | 0.000 | 0.037 | 0.068 | 0.100 | 0.259 | 0.000 | 0.045 | 0.046 |
| Cyclopentene | 218 | 0.000 | 0.010 | 0.017 | 0.025 | 0.033 | 0.057 | 0.000 | 0.018 | 0.012 |
| Decane | 218 | 0.000 | 0.000 | 0.030 | 0.066 | 0.131 | 0.400 | 0.000 | 0.050 | 0.067 |
| Dichloromethane | 218 | 0.139 | 0.171 | 0.212 | 0.322 | 0.687 | 3.530 | 0.116 | 0.357 | 0.449 |
| Dodecane | 218 | 0.000 | 0.000 | 0.000 | 0.043 | 0.073 | 0.461 | 0.000 | 0.030 | 0.054 |
| Ethane | 218 | 0.931 | 1.272 | 2.019 | 3.021 | 4.016 | 6.660 | 0.768 | 2.315 | 1.229 |
| Ethylbenzene | 218 | 0.026 | 0.041 | 0.075 | 0.191 | 0.456 | 1.476 | 0.015 | 0.172 | 0.230 |
| Ethylene | 218 | 0.190 | 0.234 | 0.336 | 0.643 | 1.095 | 3.054 | 0.163 | 0.538 | 0.492 |
| Formaldehyde | 140 | 0.633 | 1.284 | 2.220 | 3.081 | 3.870 | 6.223 | 0.102 | 2.280 | 1.220 |
| Freon11 | 218 | 1.086 | 1.392 | 1.575 | 1.747 | 1.831 | 2.261 | 0.981 | 1.551 | 0.254 |
| Freon22 | 218 | 0.387 | 0.462 | 0.524 | 0.583 | 0.666 | 1.064 | 0.287 | 0.534 | 0.112 |
| Heptane | 218 | 0.000 | 0.060 | 0.090 | 0.140 | 0.219 | 0.598 | 0.000 | 0.114 | 0.089 |
| Hexane | 218 | 0.033 | 0.063 | 0.107 | 0.260 | 0.425 | 1.500 | 0.000 | 0.200 | 0.233 |
| Indane | 218 | 0.000 | 0.000 | 0.016 | 0.025 | 0.035 | 0.085 | 0.000 | 0.016 | 0.017 |
| Isobutane | 218 | 0.052 | 0.135 | 0.276 | 0.616 | 1.192 | 2.430 | 0.028 | 0.461 | 0.482 |
| Isopentane | 218 | 0.109 | 0.208 | 0.449 | 0.939 | 1.543 | 3.010 | 0.059 | 0.674 | 0.628 |
| Isoprene | 218 | 0.000 | 0.020 | 0.124 | 0.388 | 0.896 | 2.669 | 0.000 | 0.330 | 0.539 |
| iso-Propylbenzene | 218 | 0.000 | 0.014 | 0.019 | 0.028 | 0.039 | 0.092 | 0.000 | 0.022 | 0.014 |
| m and p-Xylene | 218 | 0.042 | 0.061 | 0.103 | 0.317 | 0.906 | 4.187 | 0.029 | 0.339 | 0.593 |
| MEK | 140 | 0.000 | 0.198 | 0.490 | 0.854 | 1.401 | 6.187 | 0.000 | 0.662 | 0.795 |
| Methylcyclohexane | 218 | 0.000 | 0.000 | 0.026 | 0.064 | 0.111 | 0.510 | 0.000 | 0.048 | 0.080 |

## Table 39 VOC Annual Statistics at Egbert (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| Methylcyclopentane | 218 | 0.000 | 0.014 | 0.039 | 0.100 | 0.173 | 0.423 | 0.000 | 0.069 | 0.079 |
| Naphthalene | 193 | 0.008 | 0.017 | 0.024 | 0.046 | 0.088 | 0.323 | 0.000 | 0.040 | 0.045 |
| n-Butylbenzene | 218 | 0.000 | 0.000 | 0.000 | 0.018 | 0.025 | 0.046 | 0.000 | 0.009 | 0.011 |
| Nonane | 218 | 0.000 | 0.000 | 0.026 | 0.060 | 0.109 | 0.320 | 0.000 | 0.043 | 0.058 |
| n-Propylbenzene | 218 | 0.006 | 0.017 | 0.025 | 0.040 | 0.073 | 0.170 | 0.000 | 0.034 | 0.029 |
| Octane | 218 | 0.000 | 0.028 | 0.044 | 0.069 | 0.124 | 0.397 | 0.000 | 0.059 | 0.062 |
| o-Xylene | 218 | 0.021 | 0.030 | 0.048 | 0.122 | 0.298 | 1.106 | 0.000 | 0.119 | 0.170 |
| p-Cymene | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.026 | 0.055 | 0.000 | 0.006 | 0.013 |
| Pentane | 218 | 0.089 | 0.156 | 0.300 | 0.587 | 0.923 | 1.821 | 0.045 | 0.427 | 0.367 |
| Propane | 218 | 0.138 | 0.428 | 1.049 | 2.110 | 3.123 | 5.230 | 0.000 | 1.411 | 1.187 |
| Propionaldehyde | 140 | 0.000 | 0.091 | 0.233 | 0.338 | 0.514 | 1.476 | 0.000 | 0.246 | 0.218 |
| Propylene | 218 | 0.057 | 0.074 | 0.095 | 0.157 | 0.259 | 0.914 | 0.037 | 0.141 | 0.125 |
| Styrene | 218 | 0.000 | 0.000 | 0.022 | 0.032 | 0.074 | 0.390 | 0.000 | 0.035 | 0.060 |
| Toluene | 218 | 0.114 | 0.177 | 0.334 | 0.800 | 2.072 | 9.417 | 0.067 | 0.812 | 1.240 |
| trans-1,2-Dimethylcyclo | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.035 | 0.110 | 0.000 | 0.009 | 0.021 |
| trans-1,4-Dimethylcyclo | 218 | 0.000 | 0.000 | 0.000 | 0.008 | 0.019 | 0.069 | 0.000 | 0.006 | 0.012 |
| trans-2-Butene | 218 | 0.000 | 0.000 | 0.000 | 0.024 | 0.034 | 0.080 | 0.000 | 0.013 | 0.017 |
| trans-2-Hexene | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.016 | 0.036 | 0.000 | 0.003 | 0.008 |
| trans-2-Pentene | 218 | 0.000 | 0.000 | 0.000 | 0.020 | 0.027 | 0.083 | 0.000 | 0.010 | 0.015 |
| trans-3-Methyl-2-penten | 218 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Trichloroethylene | 218 | 0.025 | 0.045 | 0.059 | 0.090 | 0.153 | 0.545 | 0.000 | 0.088 | 0.092 |
| Undecane | 218 | 0.000 | 0.000 | 0.030 | 0.053 | 0.102 | 0.270 | 0.000 | 0.040 | 0.046 |

*Note: VOC sites are operated by Environment Canada.*

## Table 40 VOC Annual Statistics at Etobicoke South (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 56 | 0.328 | 0.360 | 0.390 | 0.416 | 0.460 | 1.770 | 0.240 | 0.418 | 0.191 |
| 1,1,2,2-Tetrachloroethane | 56 | 0.000 | 0.030 | 0.060 | 0.070 | 0.080 | 0.100 | 0.000 | 0.051 | 0.025 |
| 1,1,2-Trichloroethane | 56 | 0.000 | 0.020 | 0.050 | 0.060 | 0.060 | 0.090 | 0.000 | 0.041 | 0.027 |
| 1,1-Dichloroethane | 56 | 0.000 | 0.000 | 0.040 | 0.050 | 0.060 | 0.730 | 0.000 | 0.042 | 0.096 |
| 1,1-Dichloroethylene | 56 | 0.000 | 0.030 | 0.080 | 0.090 | 0.090 | 0.110 | 0.000 | 0.060 | 0.032 |
| 1,2,3-Trimethylbenzene | 56 | 0.088 | 0.158 | 0.260 | 0.361 | 0.520 | 0.820 | 0.040 | 0.286 | 0.172 |
| 1,2,4-Trichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 56 | 0.380 | 0.585 | 1.030 | 1.455 | 2.120 | 3.710 | 0.180 | 1.152 | 0.743 |
| 1,2-Dichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 56 | 0.060 | 0.073 | 0.090 | 0.125 | 0.210 | 0.330 | 0.060 | 0.116 | 0.065 |
| 1,2-Dichloropropane | 56 | 0.000 | 0.000 | 0.000 | 0.050 | 0.050 | 0.060 | 0.000 | 0.020 | 0.024 |
| 1,2-Diethylbenzene | 56 | 0.010 | 0.020 | 0.030 | 0.050 | 0.055 | 0.090 | 0.000 | 0.036 | 0.017 |
| 1,3,5-Trimethylbenzene | 56 | 0.128 | 0.198 | 0.340 | 0.478 | 0.685 | 1.120 | 0.060 | 0.374 | 0.231 |
| 1,3-Butadiene | 56 | 0.128 | 0.180 | 0.210 | 0.290 | 0.395 | 0.640 | 0.100 | 0.252 | 0.111 |
| 1,3-Dichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 56 | 0.030 | 0.042 | 0.070 | 0.100 | 0.130 | 0.200 | 0.010 | 0.077 | 0.040 |
| 1,4-Dichlorobenzene | 56 | 0.050 | 0.090 | 0.130 | 0.193 | 0.295 | 0.420 | 0.040 | 0.155 | 0.094 |
| 1,4-Dichlorobutane | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.100 | 0.000 | 0.008 | 0.020 |
| 1,4-Diethylbenzene | 54 | 0.077 | 0.120 | 0.190 | 0.269 | 0.367 | 0.690 | 0.040 | 0.214 | 0.122 |
| 1-Butene/Isobutene | 56 | 0.468 | 0.620 | 0.775 | 1.105 | 1.365 | 2.090 | 0.320 | 0.880 | 0.373 |
| 1-Butyne | 56 | 0.000 | 0.000 | 0.010 | 0.040 | 0.040 | 0.060 | 0.000 | 0.018 | 0.019 |
| 1-Decene | 36 | 0.000 | 0.000 | 0.035 | 0.133 | 0.175 | 0.240 | 0.000 | 0.066 | 0.079 |
| 1-Heptene | 36 | 0.078 | 0.118 | 0.180 | 0.230 | 0.300 | 0.406 | 0.050 | 0.180 | 0.085 |
| 1-Hexene | 56 | 0.108 | 0.200 | 0.245 | 0.293 | 0.315 | 0.550 | 0.000 | 0.246 | 0.096 |
| 1-Methylcyclohexene | 56 | 0.030 | 0.058 | 0.070 | 0.070 | 0.080 | 0.120 | 0.030 | 0.064 | 0.018 |
| 1-Methylcyclopentene | 56 | 0.040 | 0.058 | 0.070 | 0.100 | 0.120 | 0.190 | 0.000 | 0.080 | 0.036 |
| 1-Nonene | 36 | 0.000 | 0.000 | 0.030 | 0.095 | 0.135 | 0.230 | 0.000 | 0.052 | 0.061 |
| 1-Octene | 36 | 0.000 | 0.038 | 0.050 | 0.060 | 0.080 | 0.130 | 0.000 | 0.048 | 0.029 |
| 1-Pentene | 56 | 0.093 | 0.130 | 0.200 | 0.243 | 0.295 | 0.510 | 0.000 | 0.196 | 0.086 |
| 1-Propyne | 53 | 0.070 | 0.100 | 0.130 | 0.170 | 0.218 | 0.360 | 0.000 | 0.138 | 0.061 |
| 2,2,3-Trimethylbutane | 56 | 0.000 | 0.000 | 0.000 | 0.020 | 0.035 | 0.050 | 0.000 | 0.009 | 0.015 |
| 2,2,4-Trimethylpentane | 56 | 0.283 | 0.423 | 0.660 | 0.895 | 1.245 | 2.230 | 0.220 | 0.723 | 0.392 |
| 2,2,5-Trimethylhexane | 56 | 0.020 | 0.040 | 0.050 | 0.080 | 0.100 | 0.180 | 0.020 | 0.061 | 0.033 |
| 2,2-Dimethylbutane | 56 | 0.100 | 0.158 | 0.230 | 0.313 | 0.390 | 0.690 | 0.090 | 0.243 | 0.117 |
| 2,2-Dimethylhexane | 56 | 0.018 | 0.022 | 0.035 | 0.050 | 0.060 | 0.080 | 0.010 | 0.038 | 0.017 |
| 2,2-Dimethylpentane | 56 | 0.030 | 0.040 | 0.060 | 0.080 | 0.110 | 0.220 | 0.020 | 0.069 | 0.040 |
| 2,2-Dimethylpropane | 56 | 0.030 | 0.050 | 0.060 | 0.080 | 0.100 | 0.460 | 0.030 | 0.072 | 0.058 |

## Table 40 VOC Annual Statistics at Etobicoke South (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 56 | 0.105 | 0.160 | 0.245 | 0.350 | 0.465 | 0.850 | 0.080 | 0.281 | 0.157 |
| 2,3-Dimethylbutane | 56 | 0.155 | 0.245 | 0.405 | 0.545 | 0.720 | 1.190 | 0.140 | 0.427 | 0.231 |
| 2,3-Dimethylpentane | 56 | 0.153 | 0.220 | 0.310 | 0.433 | 0.585 | 0.940 | 0.120 | 0.351 | 0.178 |
| 2,4-Dimethylhexane | 56 | 0.070 | 0.110 | 0.140 | 0.193 | 0.275 | 0.430 | 0.050 | 0.160 | 0.081 |
| 2,4-Dimethylpentane | 56 | 0.060 | 0.108 | 0.175 | 0.230 | 0.330 | 0.610 | 0.030 | 0.191 | 0.113 |
| 2,5-Dimethylhexane | 56 | 0.050 | 0.085 | 0.120 | 0.153 | 0.230 | 0.350 | 0.040 | 0.133 | 0.066 |
| 2-Ethyl-1-Butene | 56 | 0.000 | 0.020 | 0.030 | 0.040 | 0.060 | 0.100 | 0.000 | 0.032 | 0.022 |
| 2-Ethyltoluene | 56 | 0.100 | 0.165 | 0.275 | 0.373 | 0.525 | 0.880 | 0.060 | 0.295 | 0.173 |
| 2-Methyl-1-butene | 56 | 0.088 | 0.160 | 0.250 | 0.370 | 0.490 | 1.230 | 0.000 | 0.286 | 0.191 |
| 2-Methyl-2-butene | 56 | 0.163 | 0.235 | 0.340 | 0.465 | 0.620 | 0.920 | 0.090 | 0.367 | 0.178 |
| 2-Methylheptane | 56 | 0.125 | 0.208 | 0.285 | 0.408 | 0.580 | 1.190 | 0.080 | 0.347 | 0.225 |
| 2-Methylhexane | 56 | 0.230 | 0.398 | 0.512 | 0.758 | 1.070 | 1.590 | 0.180 | 0.602 | 0.320 |
| 2-Methylpentane | 56 | 0.628 | 0.923 | 1.480 | 1.845 | 3.015 | 4.290 | 0.580 | 1.604 | 0.870 |
| 3,6-Dimethyloctane | 56 | 0.000 | 0.030 | 0.055 | 0.080 | 0.105 | 0.150 | 0.000 | 0.055 | 0.039 |
| 3-Ethyltoluene | 56 | 0.228 | 0.365 | 0.625 | 0.853 | 1.235 | 1.870 | 0.140 | 0.678 | 0.406 |
| 3-Methyl-1-pentene | 56 | 0.000 | 0.000 | 0.050 | 0.070 | 0.080 | 0.130 | 0.000 | 0.039 | 0.035 |
| 3-Methylheptane | 56 | 0.108 | 0.178 | 0.250 | 0.323 | 0.550 | 0.850 | 0.070 | 0.290 | 0.174 |
| 3-Methylhexane | 56 | 0.228 | 0.419 | 0.600 | 0.893 | 1.200 | 1.810 | 0.100 | 0.674 | 0.385 |
| 3-Methylpentane | 56 | 0.450 | 0.665 | 1.005 | 1.475 | 1.885 | 2.930 | 0.400 | 1.104 | 0.602 |
| 4-Ethyltoluene | 56 | 0.128 | 0.190 | 0.325 | 0.480 | 0.645 | 0.990 | 0.090 | 0.360 | 0.211 |
| 4-Methyl-1-pentene | 56 | 0.000 | 0.000 | 0.045 | 0.060 | 0.075 | 0.100 | 0.000 | 0.036 | 0.033 |
| 4-Methylheptane | 56 | 0.050 | 0.080 | 0.108 | 0.160 | 0.240 | 0.390 | 0.030 | 0.130 | 0.080 |
| Acetylene | 56 | 1.189 | 1.677 | 2.423 | 2.996 | 4.450 | 7.321 | 0.821 | 2.616 | 1.296 |
| Benzene | 56 | 0.820 | 1.178 | 1.475 | 1.940 | 2.525 | 4.470 | 0.600 | 1.648 | 0.714 |
| Benzylchloride | 56 | 0.030 | 0.032 | 0.060 | 0.063 | 0.080 | 0.139 | 0.020 | 0.054 | 0.022 |
| Bromodichloromethane | 39 | 0.000 | 0.080 | 0.100 | 0.110 | 0.130 | 0.160 | 0.000 | 0.088 | 0.041 |
| Bromoform | 56 | 0.030 | 0.040 | 0.060 | 0.070 | 0.080 | 0.090 | 0.030 | 0.055 | 0.018 |
| Bromomethane | 56 | 0.092 | 0.118 | 0.180 | 0.210 | 0.225 | 0.300 | 0.090 | 0.166 | 0.053 |
| Bromotrichloromethane | 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Butane | 56 | 2.038 | 2.953 | 3.905 | 7.001 | 11.250 | 40.740 | 1.210 | 5.960 | 5.987 |
| Carbontetrachloride | 56 | 0.553 | 0.620 | 0.650 | 0.673 | 0.725 | 0.740 | 0.360 | 0.642 | 0.073 |
| Chlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Chloroethane | 56 | 0.050 | 0.078 | 0.100 | 0.123 | 0.180 | 0.320 | 0.000 | 0.107 | 0.055 |
| Chloroform | 56 | 0.090 | 0.128 | 0.160 | 0.193 | 0.270 | 1.230 | 0.080 | 0.184 | 0.156 |
| Chloromethane | 56 | 1.028 | 1.120 | 1.180 | 1.253 | 1.340 | 1.660 | 0.880 | 1.195 | 0.132 |
| cis-1,2-Dichloroethylene | 56 | 0.000 | 0.020 | 0.050 | 0.050 | 0.060 | 0.070 | 0.000 | 0.039 | 0.023 |
| cis-1,2-Dimethylcyclohex | 53 | 0.000 | 0.040 | 0.050 | 0.070 | 0.090 | 0.120 | 0.000 | 0.055 | 0.028 |

## Table 40 VOC Annual Statistics at Etobicoke South (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dichloropropene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.020 | 0.000 | 0.002 | 0.005 |
| cis-1,3-Dimethylcyclohex | 53 | 0.046 | 0.080 | 0.110 | 0.210 | 0.356 | 0.560 | 0.030 | 0.161 | 0.123 |
| cis-1,4/t-1,3-Dimethylcyc | 56 | 0.020 | 0.030 | 0.046 | 0.080 | 0.110 | 0.150 | 0.010 | 0.057 | 0.034 |
| cis-2-Butene | 56 | 0.100 | 0.150 | 0.210 | 0.290 | 0.355 | 0.520 | 0.070 | 0.228 | 0.107 |
| cis-2-Heptene | 56 | 0.000 | 0.000 | 0.045 | 0.060 | 0.080 | 0.110 | 0.000 | 0.038 | 0.031 |
| cis-2-Hexene | 56 | 0.000 | 0.020 | 0.040 | 0.070 | 0.080 | 0.130 | 0.000 | 0.043 | 0.032 |
| cis-2-Pentene | 56 | 0.088 | 0.148 | 0.180 | 0.233 | 0.280 | 0.420 | 0.060 | 0.188 | 0.073 |
| cis-3-Methyl-2-pentene | 56 | 0.020 | 0.040 | 0.050 | 0.070 | 0.090 | 0.150 | 0.000 | 0.056 | 0.030 |
| cis-4-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.000 | 0.090 | 0.125 | 0.214 | 0.000 | 0.047 | 0.059 |
| Cyclohexane | 56 | 0.078 | 0.128 | 0.182 | 0.253 | 0.375 | 0.670 | 0.060 | 0.210 | 0.127 |
| Cyclohexene | 56 | 0.000 | 0.000 | 0.035 | 0.060 | 0.070 | 0.170 | 0.000 | 0.034 | 0.037 |
| Cyclopentane | 56 | 0.120 | 0.180 | 0.305 | 0.468 | 0.635 | 2.250 | 0.110 | 0.395 | 0.374 |
| Cyclopentene | 54 | 0.030 | 0.040 | 0.060 | 0.090 | 0.117 | 0.150 | 0.030 | 0.068 | 0.033 |
| Decane | 56 | 0.170 | 0.313 | 0.643 | 0.950 | 1.340 | 2.380 | 0.110 | 0.697 | 0.470 |
| Dibromochloromethane | 51 | 0.010 | 0.030 | 0.060 | 0.070 | 0.080 | 0.130 | 0.000 | 0.053 | 0.029 |
| Dibromomethane | 56 | 0.049 | 0.060 | 0.115 | 0.120 | 0.130 | 0.150 | 0.000 | 0.095 | 0.037 |
| Dichloromethane | 56 | 0.565 | 1.123 | 2.215 | 4.457 | 11.880 | 36.050 | 0.250 | 4.665 | 6.537 |
| Dodecane | 56 | 0.070 | 0.118 | 0.160 | 0.240 | 0.290 | 0.470 | 0.040 | 0.180 | 0.088 |
| EDB | 56 | 0.015 | 0.030 | 0.070 | 0.080 | 0.080 | 0.110 | 0.000 | 0.056 | 0.027 |
| Ethane | 56 | 2.243 | 3.337 | 4.307 | 5.367 | 6.849 | 14.668 | 1.144 | 4.576 | 2.109 |
| Ethylbenzene | 56 | 0.433 | 0.890 | 1.665 | 2.240 | 2.565 | 5.470 | 0.400 | 1.704 | 1.034 |
| Ethylbromide | 56 | 0.000 | 0.000 | 0.040 | 0.050 | 0.050 | 0.060 | 0.000 | 0.027 | 0.022 |
| Ethylene | 56 | 1.760 | 2.908 | 3.676 | 5.208 | 7.609 | 10.483 | 1.322 | 4.230 | 2.093 |
| Freon11 | 56 | 1.620 | 1.735 | 1.808 | 1.923 | 2.025 | 2.400 | 1.280 | 1.836 | 0.193 |
| Freon113 | 51 | 0.601 | 0.806 | 0.860 | 0.910 | 0.967 | 1.370 | 0.490 | 0.858 | 0.124 |
| Freon114 | 56 | 0.150 | 0.170 | 0.260 | 0.280 | 0.295 | 0.340 | 0.150 | 0.237 | 0.055 |
| Freon12 | 56 | 2.528 | 2.738 | 2.862 | 3.063 | 3.545 | 3.920 | 2.330 | 2.946 | 0.339 |
| Freon22 | 56 | 0.528 | 0.705 | 0.915 | 1.100 | 1.360 | 2.480 | 0.490 | 0.966 | 0.380 |
| Heptane | 56 | 0.230 | 0.358 | 0.495 | 0.698 | 1.060 | 1.500 | 0.200 | 0.588 | 0.319 |
| Hexachlorobutadiene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.000 | 0.001 | 0.005 |
| Hexane | 56 | 0.483 | 0.780 | 1.030 | 1.565 | 2.039 | 3.700 | 0.390 | 1.217 | 0.693 |
| Hexylbenzene | 49 | 0.000 | 0.000 | 0.000 | 0.040 | 0.060 | 0.090 | 0.000 | 0.021 | 0.027 |
| Indane | 56 | 0.050 | 0.080 | 0.120 | 0.170 | 0.220 | 0.330 | 0.030 | 0.130 | 0.066 |
| Isobutane | 56 | 0.950 | 1.388 | 2.394 | 4.973 | 7.705 | 19.790 | 0.730 | 3.757 | 3.739 |
| iso-Butylbenzene | 56 | 0.020 | 0.030 | 0.040 | 0.050 | 0.070 | 0.090 | 0.010 | 0.041 | 0.019 |
| Isopentane | 56 | 1.865 | 2.440 | 4.265 | 5.835 | 7.245 | 13.030 | 1.150 | 4.595 | 2.400 |
| Isoprene | 52 | 0.076 | 0.120 | 0.210 | 0.260 | 0.449 | 0.850 | 0.050 | 0.233 | 0.165 |

## Table 40 VOC Annual Statistics at Etobicoke South (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| iso-Propylbenzene | 56 | 0.038 | 0.060 | 0.090 | 0.110 | 0.140 | 0.200 | 0.030 | 0.090 | 0.041 |
| m and p-Xylene | 56 | 1.248 | 2.795 | 5.465 | 7.463 | 9.086 | 20.650 | 1.100 | 5.679 | 3.816 |
| Methylcyclohexane | 56 | 0.100 | 0.190 | 0.270 | 0.365 | 0.665 | 1.410 | 0.100 | 0.340 | 0.238 |
| Methylcyclopentane | 56 | 0.188 | 0.325 | 0.453 | 0.673 | 0.945 | 1.610 | 0.170 | 0.546 | 0.322 |
| Naphthalene | 28 | 0.234 | 0.258 | 0.360 | 0.447 | 0.587 | 0.780 | 0.090 | 0.382 | 0.160 |
| n-Butylbenzene | 56 | 0.030 | 0.040 | 0.060 | 0.090 | 0.120 | 0.210 | 0.020 | 0.071 | 0.039 |
| Nonane | 56 | 0.120 | 0.220 | 0.395 | 0.590 | 0.775 | 1.220 | 0.090 | 0.430 | 0.260 |
| n-Propylbenzene | 56 | 0.085 | 0.135 | 0.215 | 0.301 | 0.415 | 0.610 | 0.060 | 0.237 | 0.133 |
| Octane | 56 | 0.118 | 0.190 | 0.265 | 0.453 | 0.655 | 1.200 | 0.090 | 0.349 | 0.235 |
| o-Xylene | 56 | 0.403 | 0.893 | 1.430 | 2.058 | 2.466 | 4.100 | 0.300 | 1.553 | 0.875 |
| p-Cymene | 56 | 0.028 | 0.040 | 0.060 | 0.100 | 0.130 | 0.220 | 0.000 | 0.074 | 0.045 |
| Pentane | 56 | 1.093 | 1.503 | 2.675 | 3.253 | 4.170 | 7.060 | 0.740 | 2.662 | 1.314 |
| Propane | 56 | 2.355 | 3.615 | 5.910 | 7.433 | 10.805 | 14.110 | 2.050 | 6.076 | 3.077 |
| Propylene | 56 | 0.583 | 0.900 | 1.110 | 1.468 | 2.095 | 3.140 | 0.440 | 1.281 | 0.584 |
| sec-Butylbenzene | 56 | 0.020 | 0.030 | 0.040 | 0.060 | 0.080 | 0.110 | 0.010 | 0.046 | 0.022 |
| Styrene | 52 | 0.000 | 0.260 | 1.315 | 7.238 | 12.769 | 19.740 | 0.000 | 4.114 | 5.285 |
| tert-Butylbenzene | 56 | 0.000 | 0.000 | 0.015 | 0.040 | 0.040 | 0.050 | 0.000 | 0.018 | 0.018 |
| Tetrachloroethylene | 56 | 0.268 | 0.443 | 0.820 | 1.340 | 1.975 | 7.110 | 0.130 | 1.171 | 1.241 |
| Toluene | 56 | 1.995 | 4.205 | 6.020 | 9.883 | 13.220 | 26.560 | 1.280 | 7.509 | 5.135 |
| trans-1,2-Dichloroethylen | 54 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.027 | 0.021 |
| trans-1,2-Dimethylcycloh | 56 | 0.028 | 0.060 | 0.080 | 0.150 | 0.240 | 0.360 | 0.000 | 0.110 | 0.082 |
| trans-1,3-Dichloropropen | 56 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.060 | 0.000 | 0.011 | 0.015 |
| trans-1,4-Dimethylcycloh | 56 | 0.020 | 0.039 | 0.050 | 0.083 | 0.150 | 0.270 | 0.010 | 0.070 | 0.053 |
| trans-2-Butene | 56 | 0.100 | 0.150 | 0.225 | 0.323 | 0.425 | 0.600 | 0.070 | 0.252 | 0.128 |
| trans-2-Heptene | 56 | 0.000 | 0.000 | 0.040 | 0.050 | 0.060 | 0.110 | 0.000 | 0.032 | 0.025 |
| trans-2-Hexene | 56 | 0.020 | 0.030 | 0.050 | 0.079 | 0.100 | 0.150 | 0.000 | 0.057 | 0.031 |
| trans-2-Octene | 20 | 0.000 | 0.000 | 0.000 | 0.030 | 0.052 | 0.380 | 0.000 | 0.032 | 0.085 |
| trans-2-Pentene | 56 | 0.050 | 0.090 | 0.180 | 0.260 | 0.370 | 0.590 | 0.040 | 0.189 | 0.120 |
| trans-3-Heptene | 56 | 0.000 | 0.000 | 0.000 | 0.002 | 0.010 | 0.020 | 0.000 | 0.003 | 0.006 |
| trans-3-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.000 | 0.053 | 0.080 | 0.130 | 0.000 | 0.030 | 0.036 |
| trans-4-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.150 | 0.000 | 0.011 | 0.032 |
| Trichloroethylene | 56 | 0.120 | 0.210 | 0.370 | 0.600 | 0.875 | 1.340 | 0.070 | 0.445 | 0.314 |
| Undecane | 56 | 0.128 | 0.238 | 0.415 | 0.593 | 0.845 | 1.680 | 0.070 | 0.461 | 0.307 |
| Vinylchloride | 56 | 0.000 | 0.020 | 0.030 | 0.040 | 0.040 | 0.070 | 0.000 | 0.028 | 0.015 |

*Note: VOC sites are operated by Environment Canada.*

## Table 41 VOC Annual Statistics at Etobicoke West (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 27 | 0.336 | 0.355 | 0.380 | 0.390 | 0.416 | 0.450 | 0.260 | 0.375 | 0.036 |
| 1,1,2,2-Tetrachloroethane | 27 | 0.000 | 0.020 | 0.030 | 0.040 | 0.060 | 0.070 | 0.000 | 0.031 | 0.021 |
| 1,1,2-Trichloroethane | 27 | 0.000 | 0.000 | 0.020 | 0.030 | 0.054 | 0.060 | 0.000 | 0.020 | 0.022 |
| 1,1-Dichloroethane | 27 | 0.000 | 0.000 | 0.000 | 0.025 | 0.044 | 0.060 | 0.000 | 0.013 | 0.020 |
| 1,1-Dichloroethylene | 27 | 0.006 | 0.030 | 0.030 | 0.040 | 0.090 | 0.100 | 0.000 | 0.042 | 0.027 |
| 1,2,3-Trimethylbenzene | 27 | 0.043 | 0.065 | 0.140 | 0.170 | 0.240 | 0.490 | 0.010 | 0.145 | 0.103 |
| 1,2,4-Trichlorobenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 27 | 0.151 | 0.265 | 0.450 | 0.781 | 0.922 | 2.170 | 0.020 | 0.564 | 0.454 |
| 1,2-Dichlorobenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 27 | 0.054 | 0.060 | 0.070 | 0.075 | 0.100 | 0.150 | 0.050 | 0.074 | 0.021 |
| 1,2-Dichloropropane | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.038 | 0.060 | 0.000 | 0.007 | 0.018 |
| 1,2-Diethylbenzene | 27 | 0.010 | 0.015 | 0.020 | 0.030 | 0.040 | 0.050 | 0.000 | 0.024 | 0.012 |
| 1,3,5-Trimethylbenzene | 27 | 0.043 | 0.090 | 0.140 | 0.250 | 0.304 | 0.720 | 0.010 | 0.184 | 0.152 |
| 1,3-Butadiene | 27 | 0.062 | 0.105 | 0.150 | 0.215 | 0.291 | 0.550 | 0.050 | 0.177 | 0.112 |
| 1,3-Dichlorobenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 27 | 0.019 | 0.020 | 0.040 | 0.065 | 0.070 | 0.110 | 0.010 | 0.044 | 0.025 |
| 1,4-Dichlorobenzene | 27 | 0.041 | 0.066 | 0.090 | 0.130 | 0.170 | 0.270 | 0.030 | 0.105 | 0.059 |
| 1,4-Dichlorobutane | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.000 | 0.001 | 0.006 |
| 1,4-Diethylbenzene | 27 | 0.043 | 0.055 | 0.100 | 0.180 | 0.248 | 0.280 | 0.020 | 0.122 | 0.079 |
| 1-Butene/Isobutene | 27 | 0.299 | 0.462 | 0.630 | 0.990 | 1.254 | 2.120 | 0.190 | 0.761 | 0.449 |
| 1-Butyne | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.000 | 0.005 | 0.013 |
| 1-Decene | 6 | 0.000 | 0.000 | 0.015 | 0.045 | 0.070 | 0.090 | 0.000 | 0.028 | 0.037 |
| 1-Heptene | 6 | 0.038 | 0.095 | 0.120 | 0.160 | 0.180 | 0.190 | 0.020 | 0.118 | 0.061 |
| 1-Hexene | 27 | 0.063 | 0.145 | 0.190 | 0.245 | 0.270 | 0.400 | 0.000 | 0.186 | 0.083 |
| 1-Methylcyclohexene | 27 | 0.006 | 0.035 | 0.050 | 0.070 | 0.070 | 0.130 | 0.000 | 0.050 | 0.027 |
| 1-Methylcyclopentene | 27 | 0.022 | 0.032 | 0.050 | 0.075 | 0.096 | 0.260 | 0.020 | 0.063 | 0.048 |
| 1-Nonene | 6 | 0.000 | 0.000 | 0.000 | 0.023 | 0.040 | 0.050 | 0.000 | 0.013 | 0.022 |
| 1-Octene | 6 | 0.000 | 0.000 | 0.010 | 0.035 | 0.045 | 0.050 | 0.000 | 0.018 | 0.022 |
| 1-Pentene | 27 | 0.063 | 0.100 | 0.150 | 0.200 | 0.260 | 0.420 | 0.058 | 0.163 | 0.084 |
| 1-Propyne | 24 | 0.040 | 0.075 | 0.095 | 0.133 | 0.164 | 0.300 | 0.030 | 0.109 | 0.062 |
| 2,2,3-Trimethylbutane | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.000 | 0.002 | 0.007 |
| 2,2,4-Trimethylpentane | 27 | 0.123 | 0.195 | 0.338 | 0.575 | 0.719 | 1.420 | 0.110 | 0.435 | 0.302 |
| 2,2,5-Trimethylhexane | 27 | 0.010 | 0.020 | 0.030 | 0.050 | 0.056 | 0.090 | 0.010 | 0.036 | 0.020 |
| 2,2-Dimethylbutane | 27 | 0.080 | 0.095 | 0.150 | 0.210 | 0.262 | 0.320 | 0.070 | 0.158 | 0.075 |
| 2,2-Dimethylhexane | 27 | 0.010 | 0.011 | 0.020 | 0.035 | 0.044 | 0.060 | 0.000 | 0.026 | 0.015 |
| 2,2-Dimethylpentane | 27 | 0.006 | 0.030 | 0.040 | 0.060 | 0.094 | 0.100 | 0.000 | 0.044 | 0.028 |
| 2,2-Dimethylpropane | 27 | 0.030 | 0.034 | 0.048 | 0.070 | 0.090 | 0.120 | 0.020 | 0.054 | 0.025 |

## Table 41 VOC Annual Statistics at Etobicoke West (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 27 | 0.050 | 0.075 | 0.130 | 0.220 | 0.262 | 0.530 | 0.050 | 0.164 | 0.110 |
| 2,3-Dimethylbutane | 27 | 0.093 | 0.140 | 0.180 | 0.372 | 0.498 | 0.760 | 0.090 | 0.273 | 0.177 |
| 2,3-Dimethylpentane | 27 | 0.083 | 0.120 | 0.230 | 0.300 | 0.368 | 0.700 | 0.080 | 0.245 | 0.153 |
| 2,4-Dimethylhexane | 27 | 0.033 | 0.055 | 0.100 | 0.130 | 0.154 | 0.270 | 0.030 | 0.105 | 0.061 |
| 2,4-Dimethylpentane | 27 | 0.040 | 0.060 | 0.104 | 0.170 | 0.201 | 0.390 | 0.030 | 0.124 | 0.081 |
| 2,5-Dimethylhexane | 27 | 0.033 | 0.049 | 0.080 | 0.110 | 0.124 | 0.230 | 0.020 | 0.086 | 0.049 |
| 2-Ethyl-1-Butene | 27 | 0.000 | 0.010 | 0.020 | 0.030 | 0.040 | 0.060 | 0.000 | 0.020 | 0.016 |
| 2-Ethyltoluene | 27 | 0.050 | 0.075 | 0.130 | 0.205 | 0.248 | 0.540 | 0.010 | 0.156 | 0.113 |
| 2-Methyl-1-butene | 27 | 0.015 | 0.080 | 0.130 | 0.260 | 0.394 | 0.450 | 0.000 | 0.178 | 0.128 |
| 2-Methyl-2-butene | 27 | 0.092 | 0.140 | 0.250 | 0.425 | 0.520 | 1.250 | 0.060 | 0.318 | 0.261 |
| 2-Methylheptane | 27 | 0.065 | 0.115 | 0.190 | 0.275 | 0.494 | 0.770 | 0.050 | 0.244 | 0.192 |
| 2-Methylhexane | 27 | 0.150 | 0.200 | 0.440 | 0.595 | 0.632 | 1.280 | 0.140 | 0.438 | 0.292 |
| 2-Methylpentane | 27 | 0.406 | 0.575 | 0.820 | 1.503 | 1.866 | 3.150 | 0.350 | 1.091 | 0.689 |
| 3,6-Dimethyloctane | 27 | 0.000 | 0.000 | 0.030 | 0.040 | 0.060 | 0.090 | 0.000 | 0.026 | 0.026 |
| 3-Ethyltoluene | 27 | 0.100 | 0.160 | 0.270 | 0.470 | 0.557 | 1.360 | 0.020 | 0.353 | 0.286 |
| 3-Methyl-1-pentene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.044 | 0.070 | 0.000 | 0.009 | 0.020 |
| 3-Methylheptane | 27 | 0.060 | 0.095 | 0.180 | 0.269 | 0.412 | 0.540 | 0.050 | 0.203 | 0.137 |
| 3-Methylhexane | 27 | 0.160 | 0.226 | 0.432 | 0.656 | 0.826 | 1.550 | 0.130 | 0.512 | 0.362 |
| 3-Methylpentane | 27 | 0.260 | 0.395 | 0.570 | 0.985 | 1.234 | 2.100 | 0.240 | 0.725 | 0.446 |
| 4-Ethyltoluene | 27 | 0.060 | 0.085 | 0.160 | 0.240 | 0.320 | 0.700 | 0.020 | 0.190 | 0.144 |
| 4-Methyl-1-pentene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.070 | 0.000 | 0.009 | 0.021 |
| 4-Methylheptane | 27 | 0.023 | 0.041 | 0.070 | 0.120 | 0.176 | 0.250 | 0.000 | 0.088 | 0.063 |
| Acetylene | 27 | 0.970 | 1.192 | 1.631 | 2.804 | 3.353 | 5.332 | 0.813 | 2.039 | 1.101 |
| Benzene | 27 | 0.581 | 0.735 | 1.300 | 1.635 | 2.132 | 3.910 | 0.540 | 1.350 | 0.766 |
| Benzylchloride | 27 | 0.020 | 0.030 | 0.030 | 0.040 | 0.060 | 0.070 | 0.020 | 0.036 | 0.015 |
| Bromodichloromethane | 9 | 0.000 | 0.000 | 0.060 | 0.090 | 0.110 | 0.110 | 0.000 | 0.056 | 0.047 |
| Bromoform | 27 | 0.030 | 0.030 | 0.040 | 0.050 | 0.060 | 0.070 | 0.030 | 0.041 | 0.014 |
| Bromomethane | 27 | 0.095 | 0.100 | 0.110 | 0.135 | 0.210 | 0.240 | 0.090 | 0.129 | 0.045 |
| Butane | 27 | 1.862 | 2.620 | 4.260 | 7.440 | 9.838 | 22.300 | 1.810 | 5.954 | 4.782 |
| Carbontetrachloride | 27 | 0.556 | 0.605 | 0.646 | 0.673 | 0.694 | 0.770 | 0.520 | 0.640 | 0.057 |
| Chlorobenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Chloroethane | 27 | 0.042 | 0.050 | 0.060 | 0.120 | 0.168 | 0.570 | 0.000 | 0.100 | 0.105 |
| Chloroform | 27 | 0.080 | 0.090 | 0.100 | 0.135 | 0.160 | 0.170 | 0.080 | 0.113 | 0.029 |
| Chloromethane | 27 | 1.070 | 1.165 | 1.190 | 1.258 | 1.372 | 1.470 | 1.012 | 1.215 | 0.109 |
| cis-1,2-Dichloroethylene | 27 | 0.000 | 0.000 | 0.020 | 0.030 | 0.050 | 0.060 | 0.000 | 0.020 | 0.020 |
| cis-1,2-Dimethylcyclohex | 24 | 0.000 | 0.000 | 0.020 | 0.050 | 0.060 | 0.060 | 0.000 | 0.025 | 0.025 |
| cis-1,3-Dichloropropene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

## Table 41 VOC Annual Statistics at Etobicoke West (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dimethylcyclohex | 27 | 0.020 | 0.035 | 0.070 | 0.125 | 0.180 | 0.360 | 0.020 | 0.097 | 0.084 |
| cis-1,4/t-1,3-Dimethylcyc | 27 | 0.000 | 0.011 | 0.030 | 0.050 | 0.060 | 0.080 | 0.000 | 0.031 | 0.022 |
| cis-2-Butene | 27 | 0.060 | 0.110 | 0.160 | 0.270 | 0.358 | 0.690 | 0.040 | 0.212 | 0.161 |
| cis-2-Heptene | 27 | 0.000 | 0.000 | 0.000 | 0.040 | 0.054 | 0.100 | 0.000 | 0.017 | 0.030 |
| cis-2-Hexene | 27 | 0.000 | 0.000 | 0.000 | 0.030 | 0.054 | 0.080 | 0.000 | 0.017 | 0.025 |
| cis-2-Pentene | 27 | 0.063 | 0.110 | 0.130 | 0.200 | 0.244 | 0.560 | 0.040 | 0.168 | 0.108 |
| cis-3-Methyl-2-pentene | 27 | 0.000 | 0.020 | 0.030 | 0.059 | 0.070 | 0.120 | 0.000 | 0.035 | 0.030 |
| cis-4-Methyl-2-pentene | 27 | 0.000 | 0.000 | 0.050 | 0.100 | 0.150 | 0.280 | 0.000 | 0.060 | 0.073 |
| Cyclohexane | 27 | 0.050 | 0.065 | 0.120 | 0.200 | 0.234 | 0.340 | 0.030 | 0.141 | 0.082 |
| Cyclohexene | 27 | 0.000 | 0.000 | 0.000 | 0.030 | 0.054 | 0.060 | 0.000 | 0.013 | 0.022 |
| Cyclopentane | 27 | 0.080 | 0.110 | 0.150 | 0.311 | 0.372 | 0.570 | 0.070 | 0.213 | 0.132 |
| Cyclopentene | 25 | 0.018 | 0.020 | 0.030 | 0.070 | 0.080 | 0.120 | 0.000 | 0.045 | 0.028 |
| Decane | 27 | 0.092 | 0.170 | 0.240 | 0.425 | 0.584 | 0.720 | 0.020 | 0.299 | 0.188 |
| Dibromochloromethane | 27 | 0.006 | 0.027 | 0.030 | 0.035 | 0.070 | 0.080 | 0.000 | 0.034 | 0.020 |
| Dibromomethane | 27 | 0.046 | 0.059 | 0.060 | 0.080 | 0.130 | 0.140 | 0.040 | 0.075 | 0.030 |
| Dichloromethane | 27 | 0.303 | 0.465 | 0.870 | 1.320 | 1.748 | 3.070 | 0.240 | 0.989 | 0.655 |
| Dodecane | 27 | 0.023 | 0.045 | 0.080 | 0.135 | 0.184 | 0.290 | 0.020 | 0.099 | 0.069 |
| EDB | 27 | 0.020 | 0.030 | 0.030 | 0.045 | 0.070 | 0.080 | 0.000 | 0.040 | 0.019 |
| Ethane | 27 | 2.858 | 3.246 | 4.174 | 5.497 | 6.089 | 8.719 | 2.759 | 4.488 | 1.463 |
| Ethylbenzene | 27 | 0.180 | 0.305 | 0.580 | 0.976 | 1.256 | 1.850 | 0.150 | 0.711 | 0.477 |
| Ethylbromide | 27 | 0.000 | 0.000 | 0.000 | 0.025 | 0.050 | 0.050 | 0.000 | 0.014 | 0.020 |
| Ethylene | 27 | 1.254 | 1.970 | 3.204 | 4.021 | 6.264 | 11.518 | 0.779 | 3.520 | 2.339 |
| Freon11 | 27 | 1.623 | 1.678 | 1.758 | 1.875 | 2.038 | 2.200 | 1.610 | 1.799 | 0.163 |
| Freon113 | 22 | 0.661 | 0.680 | 0.693 | 0.720 | 0.769 | 0.830 | 0.650 | 0.707 | 0.048 |
| Freon114 | 27 | 0.153 | 0.160 | 0.170 | 0.220 | 0.294 | 0.300 | 0.146 | 0.198 | 0.052 |
| Freon12 | 27 | 2.568 | 2.670 | 2.764 | 2.976 | 3.150 | 3.200 | 2.480 | 2.837 | 0.211 |
| Freon22 | 27 | 0.493 | 0.591 | 0.660 | 0.775 | 0.934 | 1.030 | 0.476 | 0.692 | 0.148 |
| Heptane | 27 | 0.156 | 0.200 | 0.410 | 0.505 | 0.798 | 1.510 | 0.130 | 0.437 | 0.317 |
| Hexachlorobutadiene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexane | 27 | 0.300 | 0.445 | 0.610 | 1.115 | 1.512 | 2.400 | 0.270 | 0.856 | 0.563 |
| Hexylbenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.004 | 0.040 | 0.000 | 0.002 | 0.008 |
| Indane | 27 | 0.030 | 0.030 | 0.070 | 0.095 | 0.120 | 0.210 | 0.010 | 0.074 | 0.047 |
| Isobutane | 27 | 0.909 | 1.640 | 2.580 | 3.665 | 5.314 | 7.500 | 0.810 | 2.930 | 1.827 |
| iso-Butylbenzene | 27 | 0.010 | 0.013 | 0.020 | 0.030 | 0.040 | 0.040 | 0.010 | 0.023 | 0.011 |
| Isopentane | 27 | 1.294 | 1.875 | 2.740 | 4.848 | 6.204 | 9.560 | 1.180 | 3.524 | 2.139 |
| Isoprene | 23 | 0.031 | 0.070 | 0.120 | 0.185 | 0.231 | 0.460 | 0.000 | 0.138 | 0.098 |
| iso-Propylbenzene | 27 | 0.020 | 0.030 | 0.050 | 0.068 | 0.080 | 0.130 | 0.020 | 0.053 | 0.026 |

## Table 41 VOC Annual Statistics at Etobicoke West (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| m and p-Xylene | 27 | 0.462 | 0.915 | 1.800 | 3.333 | 4.434 | 6.380 | 0.240 | 2.261 | 1.694 |
| Methylcyclohexane | 27 | 0.060 | 0.097 | 0.190 | 0.279 | 0.384 | 1.150 | 0.050 | 0.230 | 0.215 |
| Methylcyclopentane | 27 | 0.120 | 0.185 | 0.280 | 0.530 | 0.661 | 1.170 | 0.120 | 0.378 | 0.253 |
| Naphthalene | 24 | 0.082 | 0.115 | 0.220 | 0.353 | 0.480 | 0.580 | 0.080 | 0.247 | 0.151 |
| n-Butylbenzene | 27 | 0.006 | 0.020 | 0.032 | 0.060 | 0.074 | 0.080 | 0.000 | 0.040 | 0.024 |
| Nonane | 27 | 0.070 | 0.110 | 0.180 | 0.290 | 0.332 | 0.460 | 0.070 | 0.203 | 0.115 |
| n-Propylbenzene | 27 | 0.043 | 0.060 | 0.110 | 0.160 | 0.198 | 0.370 | 0.020 | 0.124 | 0.080 |
| Octane | 27 | 0.063 | 0.096 | 0.170 | 0.295 | 0.426 | 0.740 | 0.050 | 0.227 | 0.173 |
| o-Xylene | 27 | 0.165 | 0.300 | 0.530 | 1.040 | 1.446 | 2.180 | 0.110 | 0.735 | 0.571 |
| p-Cymene | 27 | 0.000 | 0.030 | 0.040 | 0.060 | 0.094 | 0.140 | 0.000 | 0.044 | 0.036 |
| Pentane | 27 | 0.803 | 1.300 | 1.890 | 2.740 | 3.518 | 5.650 | 0.780 | 2.110 | 1.144 |
| Propane | 27 | 1.938 | 2.595 | 3.880 | 5.420 | 6.767 | 8.340 | 1.730 | 4.268 | 1.884 |
| Propylene | 27 | 0.300 | 0.475 | 0.750 | 1.085 | 1.485 | 2.920 | 0.200 | 0.890 | 0.592 |
| sec-Butylbenzene | 27 | 0.010 | 0.017 | 0.024 | 0.035 | 0.040 | 0.050 | 0.000 | 0.025 | 0.013 |
| Styrene | 23 | 0.000 | 0.050 | 0.290 | 0.570 | 0.932 | 8.240 | 0.000 | 0.657 | 1.682 |
| tert-Butylbenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.000 | 0.002 | 0.008 |
| Tetrachloroethylene | 27 | 0.160 | 0.218 | 0.482 | 0.800 | 1.664 | 2.790 | 0.140 | 0.714 | 0.656 |
| Toluene | 27 | 1.219 | 2.295 | 3.250 | 5.695 | 8.748 | 12.200 | 0.740 | 4.301 | 2.942 |
| trans-1,2-Dichloroethylen | 25 | 0.000 | 0.000 | 0.000 | 0.020 | 0.020 | 0.050 | 0.000 | 0.010 | 0.014 |
| trans-1,2-Dimethylcycloh | 27 | 0.000 | 0.027 | 0.050 | 0.085 | 0.124 | 0.210 | 0.000 | 0.062 | 0.054 |
| trans-1,3-Dichloropropen | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.000 | 0.001 | 0.004 |
| trans-1,4-Dimethylcycloh | 27 | 0.010 | 0.020 | 0.032 | 0.055 | 0.090 | 0.160 | 0.010 | 0.044 | 0.038 |
| trans-2-Butene | 27 | 0.059 | 0.110 | 0.180 | 0.284 | 0.426 | 0.760 | 0.040 | 0.233 | 0.181 |
| trans-2-Heptene | 27 | 0.000 | 0.000 | 0.000 | 0.030 | 0.044 | 0.060 | 0.000 | 0.015 | 0.020 |
| trans-2-Hexene | 27 | 0.000 | 0.020 | 0.020 | 0.055 | 0.064 | 0.120 | 0.000 | 0.035 | 0.028 |
| trans-2-Octene | 21 | 0.000 | 0.000 | 0.000 | 0.040 | 0.070 | 0.120 | 0.000 | 0.020 | 0.035 |
| trans-2-Pentene | 27 | 0.032 | 0.040 | 0.060 | 0.180 | 0.270 | 0.310 | 0.024 | 0.122 | 0.096 |
| trans-3-Heptene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 | 0.000 | 0.002 |
| trans-3-Methyl-2-pentene | 27 | 0.000 | 0.000 | 0.000 | 0.010 | 0.050 | 0.100 | 0.000 | 0.014 | 0.027 |
| trans-4-Methyl-2-pentene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.088 | 0.220 | 0.000 | 0.019 | 0.050 |
| Trichloroethylene | 27 | 0.090 | 0.132 | 0.220 | 0.440 | 0.656 | 0.910 | 0.070 | 0.314 | 0.231 |
| Undecane | 27 | 0.049 | 0.115 | 0.200 | 0.285 | 0.410 | 0.520 | 0.010 | 0.218 | 0.137 |
| Vinylchloride | 27 | 0.000 | 0.010 | 0.020 | 0.030 | 0.040 | 0.050 | 0.000 | 0.020 | 0.014 |

*Note: VOC sites are operated by Environment Canada.*

## Table 42 VOC Annual Statistics at Hamilton (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 56 | 0.278 | 0.390 | 0.420 | 0.460 | 0.544 | 0.690 | 0.260 | 0.426 | 0.086 |
| 1,1,2,2-Tetrachloroethane | 56 | 0.015 | 0.030 | 0.060 | 0.070 | 0.075 | 0.090 | 0.000 | 0.050 | 0.022 |
| 1,1,2-Trichloroethane | 56 | 0.000 | 0.020 | 0.050 | 0.060 | 0.070 | 0.090 | 0.000 | 0.043 | 0.028 |
| 1,1-Dichloroethane | 56 | 0.000 | 0.000 | 0.040 | 0.050 | 0.058 | 0.080 | 0.000 | 0.030 | 0.023 |
| 1,1-Dichloroethylene | 56 | 0.028 | 0.036 | 0.070 | 0.080 | 0.095 | 0.110 | 0.000 | 0.063 | 0.028 |
| 1,2,3-Trimethylbenzene | 56 | 0.078 | 0.110 | 0.160 | 0.268 | 0.530 | 1.010 | 0.050 | 0.246 | 0.212 |
| 1,2,4-Trichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 56 | 0.243 | 0.390 | 0.625 | 1.145 | 2.469 | 4.230 | 0.160 | 1.026 | 0.968 |
| 1,2-Dichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 56 | 0.046 | 0.070 | 0.080 | 0.090 | 0.100 | 0.130 | 0.000 | 0.078 | 0.022 |
| 1,2-Dichloropropane | 56 | 0.000 | 0.000 | 0.000 | 0.050 | 0.050 | 0.150 | 0.000 | 0.020 | 0.029 |
| 1,2-Diethylbenzene | 56 | 0.000 | 0.020 | 0.030 | 0.040 | 0.055 | 0.080 | 0.000 | 0.031 | 0.018 |
| 1,3,5-Trimethylbenzene | 56 | 0.080 | 0.130 | 0.205 | 0.405 | 0.830 | 1.470 | 0.050 | 0.342 | 0.328 |
| 1,3-Butadiene | 56 | 0.078 | 0.100 | 0.140 | 0.225 | 0.410 | 0.600 | 0.050 | 0.191 | 0.135 |
| 1,3-Dichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 56 | 0.030 | 0.040 | 0.060 | 0.083 | 0.145 | 0.260 | 0.020 | 0.074 | 0.051 |
| 1,4-Dichlorobenzene | 56 | 0.078 | 0.118 | 0.175 | 0.240 | 0.440 | 1.120 | 0.060 | 0.227 | 0.197 |
| 1,4-Dichlorobutane | 56 | 0.000 | 0.000 | 0.000 | 0.023 | 0.040 | 0.580 | 0.000 | 0.020 | 0.078 |
| 1,4-Diethylbenzene | 56 | 0.068 | 0.100 | 0.140 | 0.243 | 0.432 | 0.800 | 0.040 | 0.200 | 0.158 |
| 1-Butene/Isobutene | 56 | 0.313 | 0.428 | 0.550 | 0.983 | 1.865 | 3.380 | 0.260 | 0.863 | 0.665 |
| 1-Butyne | 56 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.000 | 0.013 | 0.017 |
| 1-Decene | 39 | 0.000 | 0.000 | 0.050 | 0.080 | 0.120 | 0.370 | 0.000 | 0.056 | 0.075 |
| 1-Heptene | 39 | 0.054 | 0.105 | 0.140 | 0.275 | 0.412 | 0.920 | 0.000 | 0.209 | 0.180 |
| 1-Hexene | 56 | 0.088 | 0.184 | 0.235 | 0.298 | 0.425 | 1.170 | 0.060 | 0.266 | 0.171 |
| 1-Methylcyclohexene | 56 | 0.028 | 0.050 | 0.070 | 0.083 | 0.098 | 0.240 | 0.000 | 0.070 | 0.036 |
| 1-Methylcyclopentene | 56 | 0.030 | 0.050 | 0.070 | 0.103 | 0.189 | 0.300 | 0.000 | 0.093 | 0.068 |
| 1-Nonene | 39 | 0.000 | 0.000 | 0.000 | 0.010 | 0.068 | 0.300 | 0.000 | 0.022 | 0.055 |
| 1-Octene | 39 | 0.000 | 0.015 | 0.040 | 0.060 | 0.080 | 0.300 | 0.000 | 0.046 | 0.051 |
| 1-Pentene | 56 | 0.068 | 0.110 | 0.160 | 0.300 | 0.480 | 1.110 | 0.040 | 0.230 | 0.194 |
| 1-Propyne | 53 | 0.024 | 0.070 | 0.090 | 0.130 | 0.240 | 0.340 | 0.000 | 0.109 | 0.075 |
| 2,2,3-Trimethylbutane | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.025 | 0.110 | 0.000 | 0.007 | 0.019 |
| 2,2,4-Trimethylpentane | 56 | 0.175 | 0.340 | 0.530 | 0.915 | 1.545 | 4.130 | 0.130 | 0.788 | 0.800 |
| 2,2,5-Trimethylhexane | 56 | 0.010 | 0.030 | 0.040 | 0.063 | 0.100 | 0.240 | 0.010 | 0.056 | 0.049 |
| 2,2-Dimethylbutane | 56 | 0.080 | 0.140 | 0.230 | 0.305 | 0.485 | 0.880 | 0.070 | 0.261 | 0.175 |
| 2,2-Dimethylhexane | 56 | 0.010 | 0.020 | 0.030 | 0.050 | 0.070 | 0.130 | 0.000 | 0.039 | 0.025 |
| 2,2-Dimethylpentane | 56 | 0.010 | 0.040 | 0.060 | 0.090 | 0.130 | 0.360 | 0.000 | 0.074 | 0.060 |
| 2,2-Dimethylpropane | 56 | 0.030 | 0.049 | 0.060 | 0.080 | 0.100 | 0.150 | 0.020 | 0.065 | 0.028 |

## Table 42 VOC Annual Statistics at Hamilton (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 56 | 0.070 | 0.120 | 0.180 | 0.313 | 0.525 | 1.350 | 0.050 | 0.274 | 0.271 |
| 2,3-Dimethylbutane | 56 | 0.125 | 0.228 | 0.345 | 0.603 | 1.015 | 2.150 | 0.070 | 0.483 | 0.416 |
| 2,3-Dimethylpentane | 56 | 0.108 | 0.190 | 0.275 | 0.548 | 0.925 | 1.730 | 0.090 | 0.418 | 0.361 |
| 2,4-Dimethylhexane | 56 | 0.050 | 0.080 | 0.120 | 0.193 | 0.300 | 0.690 | 0.040 | 0.163 | 0.140 |
| 2,4-Dimethylpentane | 56 | 0.050 | 0.090 | 0.150 | 0.273 | 0.360 | 0.930 | 0.040 | 0.205 | 0.176 |
| 2,5-Dimethylhexane | 56 | 0.040 | 0.060 | 0.090 | 0.153 | 0.245 | 0.570 | 0.030 | 0.126 | 0.109 |
| 2-Ethyl-1-Butene | 56 | 0.000 | 0.010 | 0.026 | 0.050 | 0.105 | 0.190 | 0.000 | 0.039 | 0.043 |
| 2-Ethyltoluene | 56 | 0.070 | 0.110 | 0.165 | 0.300 | 0.575 | 1.030 | 0.050 | 0.257 | 0.219 |
| 2-Methyl-1-butene | 56 | 0.080 | 0.128 | 0.195 | 0.350 | 0.745 | 1.250 | 0.070 | 0.294 | 0.265 |
| 2-Methyl-2-butene | 56 | 0.108 | 0.178 | 0.285 | 0.525 | 0.990 | 1.860 | 0.090 | 0.447 | 0.428 |
| 2-Methylheptane | 56 | 0.080 | 0.118 | 0.180 | 0.320 | 0.615 | 1.340 | 0.050 | 0.278 | 0.255 |
| 2-Methylhexane | 56 | 0.170 | 0.296 | 0.394 | 0.980 | 1.365 | 2.680 | 0.120 | 0.660 | 0.590 |
| 2-Methylpentane | 56 | 0.500 | 0.870 | 1.435 | 2.561 | 5.395 | 9.250 | 0.340 | 2.166 | 2.011 |
| 3,6-Dimethyloctane | 56 | 0.000 | 0.000 | 0.030 | 0.060 | 0.085 | 0.190 | 0.000 | 0.038 | 0.042 |
| 3-Ethyltoluene | 56 | 0.160 | 0.248 | 0.380 | 0.755 | 1.395 | 2.620 | 0.110 | 0.625 | 0.571 |
| 3-Methyl-1-pentene | 56 | 0.000 | 0.000 | 0.035 | 0.063 | 0.095 | 0.140 | 0.000 | 0.038 | 0.040 |
| 3-Methylheptane | 56 | 0.060 | 0.100 | 0.150 | 0.295 | 0.550 | 1.190 | 0.000 | 0.246 | 0.238 |
| 3-Methylhexane | 56 | 0.000 | 0.260 | 0.436 | 0.813 | 1.335 | 2.800 | 0.000 | 0.658 | 0.632 |
| 3-Methylpentane | 56 | 0.355 | 0.618 | 1.015 | 2.224 | 6.875 | 12.080 | 0.250 | 2.276 | 2.891 |
| 4-Ethyltoluene | 56 | 0.090 | 0.150 | 0.220 | 0.378 | 0.705 | 1.440 | 0.060 | 0.332 | 0.289 |
| 4-Methyl-1-pentene | 56 | 0.000 | 0.000 | 0.035 | 0.060 | 0.080 | 0.250 | 0.000 | 0.037 | 0.045 |
| 4-Methylheptane | 56 | 0.028 | 0.050 | 0.070 | 0.143 | 0.255 | 0.530 | 0.000 | 0.111 | 0.104 |
| Acetylene | 56 | 0.902 | 1.348 | 2.062 | 2.909 | 4.457 | 8.756 | 0.806 | 2.441 | 1.550 |
| Benzene | 56 | 0.545 | 0.768 | 1.225 | 2.150 | 5.430 | 14.750 | 0.440 | 2.142 | 2.482 |
| Benzylchloride | 56 | 0.030 | 0.038 | 0.050 | 0.060 | 0.060 | 0.070 | 0.020 | 0.047 | 0.013 |
| Bromodichloromethane | 41 | 0.060 | 0.090 | 0.100 | 0.130 | 0.200 | 0.330 | 0.000 | 0.114 | 0.062 |
| Bromoform | 56 | 0.030 | 0.040 | 0.060 | 0.070 | 0.080 | 0.110 | 0.020 | 0.056 | 0.019 |
| Bromomethane | 56 | 0.093 | 0.118 | 0.160 | 0.183 | 0.200 | 0.250 | 0.076 | 0.153 | 0.042 |
| Bromotrichloromethane | 3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Butane | 56 | 1.408 | 2.063 | 3.655 | 7.598 | 11.505 | 34.490 | 0.860 | 5.874 | 6.266 |
| Carbontetrachloride | 56 | 0.328 | 0.570 | 0.647 | 0.680 | 0.700 | 0.760 | 0.300 | 0.599 | 0.121 |
| Chlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Chloroethane | 56 | 0.050 | 0.070 | 0.090 | 0.103 | 0.130 | 0.750 | 0.000 | 0.100 | 0.094 |
| Chloroform | 56 | 0.080 | 0.100 | 0.135 | 0.170 | 0.205 | 0.470 | 0.070 | 0.149 | 0.077 |
| Chloromethane | 56 | 0.918 | 1.098 | 1.170 | 1.250 | 1.300 | 1.680 | 0.870 | 1.173 | 0.153 |
| cis-1,2-Dichloroethylene | 56 | 0.000 | 0.020 | 0.045 | 0.050 | 0.052 | 0.060 | 0.000 | 0.037 | 0.019 |
| cis-1,2-Dimethylcyclohexa | 53 | 0.020 | 0.030 | 0.050 | 0.060 | 0.090 | 0.170 | 0.000 | 0.051 | 0.030 |

## Table 42 VOC Annual Statistics at Hamilton (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dichloropropene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.025 | 0.170 | 0.000 | 0.010 | 0.031 |
| cis-1,3-Dimethylcyclohexa | 54 | 0.020 | 0.043 | 0.070 | 0.110 | 0.240 | 0.680 | 0.020 | 0.109 | 0.116 |
| cis-1,4/t-1,3-Dimethylcycl | 56 | 0.010 | 0.020 | 0.030 | 0.047 | 0.110 | 0.250 | 0.000 | 0.044 | 0.044 |
| cis-2-Butene | 56 | 0.078 | 0.100 | 0.155 | 0.285 | 0.586 | 1.300 | 0.070 | 0.254 | 0.244 |
| cis-2-Heptene | 56 | 0.000 | 0.000 | 0.015 | 0.050 | 0.070 | 0.340 | 0.000 | 0.034 | 0.052 |
| cis-2-Hexene | 56 | 0.000 | 0.000 | 0.035 | 0.070 | 0.130 | 0.220 | 0.000 | 0.050 | 0.057 |
| cis-2-Pentene | 56 | 0.060 | 0.110 | 0.140 | 0.280 | 0.440 | 0.710 | 0.050 | 0.214 | 0.168 |
| cis-3-Methyl-2-pentene | 56 | 0.000 | 0.030 | 0.050 | 0.080 | 0.160 | 0.260 | 0.000 | 0.066 | 0.058 |
| cis-4-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.000 | 0.091 | 0.215 | 0.510 | 0.000 | 0.069 | 0.113 |
| Cyclohexane | 56 | 0.038 | 0.098 | 0.165 | 0.286 | 0.410 | 0.720 | 0.000 | 0.206 | 0.152 |
| Cyclohexene | 56 | 0.000 | 0.000 | 0.035 | 0.060 | 0.080 | 0.160 | 0.000 | 0.036 | 0.040 |
| Cyclopentane | 56 | 0.080 | 0.160 | 0.260 | 0.413 | 0.740 | 1.550 | 0.060 | 0.353 | 0.300 |
| Cyclopentene | 56 | 0.020 | 0.040 | 0.060 | 0.084 | 0.150 | 0.220 | 0.020 | 0.076 | 0.051 |
| Decane | 56 | 0.108 | 0.168 | 0.250 | 0.573 | 0.970 | 1.810 | 0.060 | 0.436 | 0.409 |
| Dibromochloromethane | 48 | 0.020 | 0.030 | 0.070 | 0.078 | 0.083 | 0.140 | 0.000 | 0.059 | 0.029 |
| Dibromomethane | 56 | 0.048 | 0.068 | 0.115 | 0.130 | 0.145 | 0.200 | 0.000 | 0.102 | 0.041 |
| Dichloromethane | 56 | 0.705 | 0.945 | 1.115 | 1.573 | 2.425 | 6.500 | 0.680 | 1.466 | 0.986 |
| Dodecane | 56 | 0.056 | 0.078 | 0.115 | 0.203 | 0.363 | 0.578 | 0.040 | 0.164 | 0.130 |
| EDB | 56 | 0.015 | 0.030 | 0.060 | 0.070 | 0.080 | 0.090 | 0.000 | 0.056 | 0.024 |
| Ethane | 56 | 2.529 | 3.534 | 4.753 | 7.122 | 11.008 | 18.033 | 1.735 | 6.016 | 3.748 |
| Ethylbenzene | 56 | 0.280 | 0.428 | 0.630 | 1.629 | 2.365 | 4.430 | 0.170 | 1.104 | 1.022 |
| Ethylbromide | 56 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.024 | 0.020 |
| Ethylene | 56 | 1.123 | 1.744 | 2.698 | 5.252 | 9.451 | 17.005 | 0.327 | 4.059 | 3.438 |
| Freon11 | 56 | 1.480 | 1.712 | 1.850 | 2.008 | 2.610 | 3.980 | 1.190 | 1.976 | 0.472 |
| Freon113 | 56 | 4.888 | 8.463 | 10.010 | 12.608 | 16.950 | 20.350 | 3.030 | 10.731 | 3.910 |
| Freon114 | 56 | 0.158 | 0.178 | 0.255 | 0.280 | 0.295 | 0.329 | 0.140 | 0.233 | 0.056 |
| Freon12 | 56 | 2.558 | 2.770 | 2.966 | 3.263 | 3.729 | 5.260 | 2.070 | 3.096 | 0.555 |
| Freon22 | 56 | 0.550 | 0.650 | 0.885 | 1.135 | 1.430 | 2.220 | 0.480 | 0.972 | 0.422 |
| Heptane | 56 | 0.175 | 0.288 | 0.440 | 0.827 | 1.335 | 2.950 | 0.110 | 0.644 | 0.582 |
| Hexachlorobutadiene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexane | 56 | 0.340 | 0.766 | 1.310 | 3.023 | 11.125 | 27.850 | 0.270 | 4.070 | 6.475 |
| Hexylbenzene | 50 | 0.000 | 0.000 | 0.000 | 0.030 | 0.051 | 0.110 | 0.000 | 0.020 | 0.028 |
| Indane | 56 | 0.040 | 0.070 | 0.095 | 0.173 | 0.285 | 0.480 | 0.030 | 0.138 | 0.105 |
| Isobutane | 56 | 0.645 | 1.018 | 1.725 | 3.263 | 5.594 | 21.830 | 0.420 | 2.838 | 3.381 |
| iso-Butylbenzene | 56 | 0.016 | 0.020 | 0.030 | 0.041 | 0.060 | 0.110 | 0.010 | 0.036 | 0.019 |
| Isopentane | 56 | 1.355 | 2.500 | 3.595 | 7.225 | 11.715 | 19.670 | 0.930 | 5.530 | 4.751 |
| Isoprene | 52 | 0.046 | 0.086 | 0.160 | 0.261 | 0.369 | 0.670 | 0.040 | 0.197 | 0.147 |

## Table 42 VOC Annual Statistics at Hamilton (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| iso-Propylbenzene | 56 | 0.030 | 0.050 | 0.060 | 0.097 | 0.145 | 0.240 | 0.020 | 0.079 | 0.048 |
| m and p-Xylene | 56 | 0.698 | 1.118 | 1.620 | 5.260 | 8.090 | 14.960 | 0.410 | 3.338 | 3.411 |
| Methylcyclohexane | 56 | 0.075 | 0.130 | 0.195 | 0.383 | 0.680 | 1.740 | 0.040 | 0.319 | 0.326 |
| Methylcyclopentane | 56 | 0.158 | 0.300 | 0.435 | 0.993 | 2.755 | 5.060 | 0.120 | 0.952 | 1.135 |
| Naphthalene | 29 | 0.144 | 0.270 | 0.450 | 1.900 | 4.102 | 33.460 | 0.070 | 2.482 | 6.295 |
| n-Butylbenzene | 56 | 0.020 | 0.033 | 0.050 | 0.070 | 0.125 | 0.240 | 0.020 | 0.064 | 0.042 |
| Nonane | 56 | 0.078 | 0.120 | 0.205 | 0.411 | 0.620 | 1.050 | 0.060 | 0.299 | 0.252 |
| n-Propylbenzene | 56 | 0.068 | 0.108 | 0.160 | 0.255 | 0.450 | 0.830 | 0.050 | 0.213 | 0.170 |
| Octane | 56 | 0.065 | 0.128 | 0.200 | 0.327 | 0.705 | 1.530 | 0.050 | 0.293 | 0.279 |
| o-Xylene | 56 | 0.228 | 0.340 | 0.547 | 1.460 | 1.980 | 3.630 | 0.140 | 0.948 | 0.872 |
| p-Cymene | 56 | 0.000 | 0.040 | 0.070 | 0.113 | 0.140 | 0.240 | 0.000 | 0.078 | 0.054 |
| Pentane | 56 | 0.848 | 1.453 | 2.040 | 4.105 | 5.740 | 10.270 | 0.600 | 2.998 | 2.432 |
| Propane | 56 | 1.653 | 2.355 | 3.830 | 5.453 | 8.415 | 15.670 | 1.270 | 4.560 | 2.976 |
| Propylene | 56 | 0.390 | 0.501 | 0.665 | 1.290 | 2.370 | 4.890 | 0.260 | 1.087 | 0.920 |
| sec-Butylbenzene | 56 | 0.018 | 0.020 | 0.040 | 0.049 | 0.070 | 0.120 | 0.000 | 0.040 | 0.023 |
| Styrene | 52 | 0.017 | 0.080 | 0.120 | 0.305 | 0.486 | 0.790 | 0.000 | 0.200 | 0.174 |
| tert-Butylbenzene | 56 | 0.000 | 0.000 | 0.000 | 0.020 | 0.040 | 0.060 | 0.000 | 0.012 | 0.017 |
| Tetrachloroethylene | 56 | 0.170 | 0.320 | 0.665 | 1.618 | 2.595 | 5.610 | 0.100 | 1.143 | 1.207 |
| Toluene | 56 | 1.515 | 1.908 | 3.745 | 8.213 | 16.275 | 75.810 | 0.850 | 7.710 | 11.492 |
| trans-1,2-Dichloroethylene | 56 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.070 | 0.000 | 0.027 | 0.020 |
| trans-1,2-Dimethylcyclohe | 56 | 0.000 | 0.010 | 0.040 | 0.080 | 0.200 | 0.430 | 0.000 | 0.069 | 0.087 |
| trans-1,3-Dichloropropene | 56 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.160 | 0.000 | 0.017 | 0.034 |
| trans-1,4-Dimethylcyclohe | 56 | 0.010 | 0.020 | 0.030 | 0.049 | 0.110 | 0.250 | 0.000 | 0.045 | 0.045 |
| trans-2-Butene | 56 | 0.088 | 0.118 | 0.169 | 0.290 | 0.630 | 1.590 | 0.070 | 0.279 | 0.286 |
| trans-2-Heptene | 56 | 0.000 | 0.000 | 0.025 | 0.050 | 0.065 | 0.260 | 0.000 | 0.030 | 0.043 |
| trans-2-Hexene | 56 | 0.000 | 0.030 | 0.050 | 0.090 | 0.165 | 0.250 | 0.000 | 0.069 | 0.062 |
| trans-2-Octene | 17 | 0.000 | 0.000 | 0.000 | 0.010 | 0.036 | 0.260 | 0.000 | 0.022 | 0.063 |
| trans-2-Pentene | 56 | 0.048 | 0.080 | 0.145 | 0.285 | 0.645 | 1.120 | 0.030 | 0.245 | 0.254 |
| trans-3-Heptene | 56 | 0.000 | 0.000 | 0.000 | 0.010 | 0.020 | 0.070 | 0.000 | 0.006 | 0.013 |
| trans-3-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.020 | 0.060 | 0.130 | 0.240 | 0.000 | 0.044 | 0.058 |
| trans-4-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.050 | 0.228 | 0.000 | 0.016 | 0.045 |
| Trichloroethylene | 56 | 0.050 | 0.090 | 0.130 | 0.223 | 0.575 | 1.240 | 0.030 | 0.235 | 0.275 |
| Undecane | 56 | 0.118 | 0.150 | 0.230 | 0.514 | 0.865 | 1.820 | 0.050 | 0.397 | 0.378 |
| Vinylchloride | 56 | 0.000 | 0.020 | 0.030 | 0.030 | 0.030 | 0.040 | 0.000 | 0.023 | 0.011 |

*Note: VOC sites are operated by Environment Canada.*

## Table 43 VOC Annual Statistics at Kingston (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 27 | 0.343 | 0.360 | 0.390 | 0.410 | 0.448 | 0.710 | 0.330 | 0.403 | 0.075 |
| 1,1,2,2-Tetrachloroethane | 27 | 0.000 | 0.020 | 0.030 | 0.050 | 0.070 | 0.080 | 0.000 | 0.036 | 0.023 |
| 1,1,2-Trichloroethane | 27 | 0.000 | 0.000 | 0.030 | 0.055 | 0.078 | 0.100 | 0.000 | 0.031 | 0.034 |
| 1,1-Dichloroethane | 27 | 0.000 | 0.000 | 0.000 | 0.040 | 0.044 | 0.060 | 0.000 | 0.017 | 0.021 |
| 1,1-Dichloroethylene | 27 | 0.000 | 0.020 | 0.036 | 0.075 | 0.080 | 0.090 | 0.000 | 0.044 | 0.032 |
| 1,2,3-Trimethylbenzene | 27 | 0.060 | 0.080 | 0.100 | 0.135 | 0.208 | 0.270 | 0.050 | 0.119 | 0.057 |
| 1,2,4-Trichlorobenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 27 | 0.193 | 0.258 | 0.350 | 0.475 | 0.684 | 0.950 | 0.180 | 0.410 | 0.202 |
| 1,2-Dichlorobenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 27 | 0.056 | 0.065 | 0.070 | 0.080 | 0.084 | 0.110 | 0.050 | 0.073 | 0.013 |
| 1,2-Dichloropropane | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.034 | 0.070 | 0.000 | 0.007 | 0.018 |
| 1,2-Diethylbenzene | 27 | 0.000 | 0.020 | 0.020 | 0.030 | 0.030 | 0.050 | 0.000 | 0.021 | 0.011 |
| 1,3,5-Trimethylbenzene | 27 | 0.063 | 0.086 | 0.120 | 0.154 | 0.224 | 0.290 | 0.050 | 0.133 | 0.064 |
| 1,3-Butadiene | 27 | 0.060 | 0.070 | 0.090 | 0.138 | 0.166 | 0.310 | 0.030 | 0.108 | 0.059 |
| 1,3-Dichlorobenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 27 | 0.020 | 0.030 | 0.030 | 0.041 | 0.064 | 0.080 | 0.020 | 0.038 | 0.016 |
| 1,4-Dichlorobenzene | 27 | 0.040 | 0.075 | 0.090 | 0.130 | 0.218 | 0.780 | 0.040 | 0.140 | 0.165 |
| 1,4-Dichlorobutane | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.004 | 0.030 | 0.000 | 0.002 | 0.007 |
| 1,4-Diethylbenzene | 27 | 0.060 | 0.070 | 0.090 | 0.110 | 0.166 | 0.230 | 0.040 | 0.102 | 0.046 |
| 1-Butene/Isobutene | 27 | 0.270 | 0.315 | 0.400 | 0.530 | 0.618 | 1.450 | 0.230 | 0.461 | 0.239 |
| 1-Butyne | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.024 | 0.060 | 0.000 | 0.006 | 0.015 |
| 1-Decene | 12 | 0.000 | 0.000 | 0.020 | 0.070 | 0.097 | 0.580 | 0.000 | 0.077 | 0.163 |
| 1-Heptene | 12 | 0.000 | 0.075 | 0.115 | 0.193 | 0.227 | 0.280 | 0.000 | 0.128 | 0.089 |
| 1-Hexene | 27 | 0.096 | 0.145 | 0.180 | 0.240 | 0.260 | 0.290 | 0.000 | 0.182 | 0.064 |
| 1-Methylcyclohexene | 27 | 0.030 | 0.035 | 0.040 | 0.060 | 0.074 | 0.100 | 0.020 | 0.048 | 0.019 |
| 1-Methylcyclopentene | 27 | 0.040 | 0.050 | 0.060 | 0.072 | 0.080 | 0.130 | 0.040 | 0.063 | 0.020 |
| 1-Nonene | 11 | 0.000 | 0.000 | 0.000 | 0.025 | 0.040 | 0.050 | 0.000 | 0.013 | 0.019 |
| 1-Octene | 11 | 0.015 | 0.030 | 0.060 | 0.070 | 0.100 | 0.100 | 0.000 | 0.055 | 0.031 |
| 1-Pentene | 27 | 0.081 | 0.110 | 0.130 | 0.150 | 0.214 | 0.280 | 0.060 | 0.141 | 0.055 |
| 1-Propyne | 25 | 0.022 | 0.040 | 0.060 | 0.090 | 0.116 | 0.750 | 0.000 | 0.091 | 0.142 |
| 2,2,3-Trimethylbutane | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.000 | 0.001 | 0.004 |
| 2,2,4-Trimethylpentane | 27 | 0.106 | 0.170 | 0.248 | 0.355 | 0.474 | 0.810 | 0.070 | 0.283 | 0.158 |
| 2,2,5-Trimethylhexane | 27 | 0.003 | 0.020 | 0.020 | 0.033 | 0.044 | 0.070 | 0.000 | 0.026 | 0.016 |
| 2,2-Dimethylbutane | 27 | 0.093 | 0.125 | 0.150 | 0.187 | 0.272 | 0.350 | 0.060 | 0.167 | 0.068 |
| 2,2-Dimethylhexane | 27 | 0.010 | 0.014 | 0.020 | 0.030 | 0.044 | 0.060 | 0.000 | 0.024 | 0.014 |
| 2,2-Dimethylpentane | 27 | 0.006 | 0.030 | 0.036 | 0.050 | 0.060 | 0.090 | 0.000 | 0.038 | 0.020 |
| 2,2-Dimethylpropane | 27 | 0.023 | 0.031 | 0.040 | 0.050 | 0.064 | 0.070 | 0.020 | 0.044 | 0.014 |

## Table 43 VOC Annual Statistics at Kingston (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 27 | 0.040 | 0.070 | 0.090 | 0.145 | 0.173 | 0.330 | 0.030 | 0.112 | 0.062 |
| 2,3-Dimethylbutane | 27 | 0.086 | 0.152 | 0.190 | 0.240 | 0.328 | 0.530 | 0.080 | 0.213 | 0.104 |
| 2,3-Dimethylpentane | 27 | 0.073 | 0.120 | 0.160 | 0.220 | 0.254 | 0.540 | 0.050 | 0.177 | 0.095 |
| 2,4-Dimethylhexane | 27 | 0.040 | 0.050 | 0.064 | 0.090 | 0.130 | 0.210 | 0.040 | 0.081 | 0.040 |
| 2,4-Dimethylpentane | 27 | 0.009 | 0.060 | 0.080 | 0.125 | 0.148 | 0.200 | 0.000 | 0.089 | 0.049 |
| 2,5-Dimethylhexane | 27 | 0.033 | 0.044 | 0.060 | 0.090 | 0.100 | 0.170 | 0.020 | 0.069 | 0.032 |
| 2-Ethyl-1-Butene | 27 | 0.000 | 0.010 | 0.020 | 0.020 | 0.030 | 0.060 | 0.000 | 0.017 | 0.014 |
| 2-Ethyltoluene | 27 | 0.060 | 0.077 | 0.100 | 0.140 | 0.172 | 0.250 | 0.050 | 0.113 | 0.050 |
| 2-Methyl-1-butene | 27 | 0.024 | 0.100 | 0.120 | 0.185 | 0.236 | 0.670 | 0.000 | 0.161 | 0.131 |
| 2-Methyl-2-butene | 27 | 0.123 | 0.177 | 0.210 | 0.302 | 0.384 | 0.670 | 0.110 | 0.247 | 0.122 |
| 2-Methylheptane | 27 | 0.080 | 0.100 | 0.130 | 0.210 | 0.248 | 0.410 | 0.070 | 0.160 | 0.080 |
| 2-Methylhexane | 27 | 0.136 | 0.239 | 0.280 | 0.370 | 0.525 | 0.890 | 0.110 | 0.325 | 0.168 |
| 2-Methylpentane | 27 | 0.394 | 0.585 | 0.750 | 0.965 | 1.184 | 2.380 | 0.370 | 0.840 | 0.410 |
| 3,6-Dimethyloctane | 27 | 0.000 | 0.010 | 0.030 | 0.040 | 0.054 | 0.130 | 0.000 | 0.030 | 0.029 |
| 3-Ethyltoluene | 27 | 0.133 | 0.170 | 0.220 | 0.311 | 0.412 | 0.600 | 0.110 | 0.258 | 0.124 |
| 3-Methyl-1-pentene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.050 | 0.090 | 0.000 | 0.013 | 0.026 |
| 3-Methylheptane | 27 | 0.073 | 0.100 | 0.130 | 0.205 | 0.240 | 0.380 | 0.060 | 0.152 | 0.075 |
| 3-Methylhexane | 27 | 0.153 | 0.239 | 0.340 | 0.420 | 0.568 | 1.060 | 0.140 | 0.362 | 0.196 |
| 3-Methylpentane | 27 | 0.293 | 0.420 | 0.510 | 0.670 | 0.904 | 1.620 | 0.260 | 0.587 | 0.297 |
| 4-Ethyltoluene | 27 | 0.080 | 0.105 | 0.120 | 0.170 | 0.234 | 0.310 | 0.080 | 0.147 | 0.065 |
| 4-Methyl-1-pentene | 27 | 0.000 | 0.000 | 0.000 | 0.035 | 0.054 | 0.080 | 0.000 | 0.016 | 0.027 |
| 4-Methylheptane | 27 | 0.030 | 0.040 | 0.050 | 0.080 | 0.104 | 0.190 | 0.000 | 0.064 | 0.038 |
| Acetylene | 27 | 0.589 | 1.123 | 1.362 | 1.863 | 2.862 | 12.812 | 0.241 | 2.015 | 2.510 |
| Benzene | 27 | 0.436 | 0.645 | 0.950 | 1.190 | 1.530 | 1.830 | 0.370 | 0.961 | 0.405 |
| Benzylchloride | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Bromodichloromethane | 13 | 0.000 | 0.000 | 0.080 | 0.100 | 0.156 | 0.180 | 0.000 | 0.075 | 0.062 |
| Bromoform | 27 | 0.030 | 0.030 | 0.040 | 0.060 | 0.070 | 0.080 | 0.020 | 0.045 | 0.017 |
| Bromomethane | 27 | 0.090 | 0.102 | 0.140 | 0.175 | 0.200 | 0.250 | 0.090 | 0.144 | 0.046 |
| Butane | 27 | 1.076 | 1.825 | 2.230 | 3.621 | 4.806 | 7.740 | 0.990 | 2.809 | 1.644 |
| Carbontetrachloride | 27 | 0.356 | 0.605 | 0.620 | 0.673 | 0.748 | 0.770 | 0.310 | 0.610 | 0.123 |
| Chlorobenzene | 27 | 0.020 | 0.030 | 0.036 | 0.050 | 0.060 | 0.060 | 0.020 | 0.039 | 0.014 |
| Chloroethane | 27 | 0.040 | 0.047 | 0.050 | 0.095 | 0.110 | 0.120 | 0.000 | 0.068 | 0.031 |
| Chloroform | 27 | 0.089 | 0.090 | 0.110 | 0.140 | 0.164 | 0.180 | 0.080 | 0.118 | 0.031 |
| Chloromethane | 27 | 1.081 | 1.115 | 1.140 | 1.220 | 1.376 | 1.420 | 1.070 | 1.191 | 0.106 |
| cis-1,2-Dichloroethylene | 27 | 0.000 | 0.000 | 0.020 | 0.040 | 0.050 | 0.060 | 0.000 | 0.021 | 0.022 |
| cis-1,2-Dimethylcyclohexa | 25 | 0.000 | 0.020 | 0.040 | 0.060 | 0.076 | 0.090 | 0.000 | 0.038 | 0.029 |
| cis-1,3-Dichloropropene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

## Table 43 VOC Annual Statistics at Kingston (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dimethylcyclohexa | 26 | 0.040 | 0.043 | 0.060 | 0.080 | 0.130 | 0.200 | 0.030 | 0.074 | 0.043 |
| cis-1,4/t-1,3-Dimethylcycl | 27 | 0.010 | 0.020 | 0.020 | 0.040 | 0.080 | 0.090 | 0.010 | 0.034 | 0.025 |
| cis-2-Butene | 27 | 0.065 | 0.090 | 0.120 | 0.150 | 0.200 | 0.500 | 0.060 | 0.139 | 0.088 |
| cis-2-Heptene | 27 | 0.000 | 0.000 | 0.070 | 0.100 | 0.120 | 0.140 | 0.000 | 0.056 | 0.050 |
| cis-2-Hexene | 27 | 0.000 | 0.000 | 0.000 | 0.035 | 0.064 | 0.090 | 0.000 | 0.021 | 0.029 |
| cis-2-Pentene | 27 | 0.090 | 0.110 | 0.130 | 0.170 | 0.214 | 0.270 | 0.050 | 0.142 | 0.051 |
| cis-3-Methyl-2-pentene | 27 | 0.000 | 0.030 | 0.030 | 0.045 | 0.064 | 0.090 | 0.000 | 0.036 | 0.024 |
| cis-4-Methyl-2-pentene | 27 | 0.000 | 0.000 | 0.044 | 0.085 | 0.114 | 0.170 | 0.000 | 0.051 | 0.050 |
| Cyclohexane | 27 | 0.060 | 0.085 | 0.120 | 0.180 | 0.232 | 0.270 | 0.050 | 0.134 | 0.066 |
| Cyclohexene | 27 | 0.000 | 0.000 | 0.000 | 0.040 | 0.060 | 0.090 | 0.000 | 0.020 | 0.029 |
| Cyclopentane | 27 | 0.083 | 0.115 | 0.140 | 0.187 | 0.234 | 0.310 | 0.060 | 0.156 | 0.064 |
| Cyclopentene | 27 | 0.023 | 0.031 | 0.050 | 0.060 | 0.074 | 0.120 | 0.020 | 0.050 | 0.023 |
| Decane | 27 | 0.130 | 0.211 | 0.290 | 0.410 | 0.480 | 0.960 | 0.080 | 0.329 | 0.191 |
| Dibromochloromethane | 23 | 0.002 | 0.020 | 0.030 | 0.055 | 0.106 | 0.130 | 0.000 | 0.045 | 0.037 |
| Dibromomethane | 27 | 0.000 | 0.050 | 0.060 | 0.105 | 0.130 | 0.180 | 0.000 | 0.073 | 0.046 |
| Dichloromethane | 27 | 0.334 | 0.440 | 0.720 | 2.885 | 4.458 | 32.960 | 0.310 | 2.975 | 6.500 |
| Dodecane | 27 | 0.049 | 0.090 | 0.150 | 0.210 | 0.706 | 3.740 | 0.030 | 0.369 | 0.749 |
| EDB | 27 | 0.000 | 0.020 | 0.030 | 0.070 | 0.092 | 0.120 | 0.000 | 0.044 | 0.036 |
| Ethane | 27 | 2.876 | 3.861 | 4.540 | 5.463 | 6.003 | 6.264 | 2.081 | 4.641 | 1.113 |
| Ethylbenzene | 27 | 0.196 | 0.270 | 0.340 | 0.525 | 0.672 | 0.840 | 0.180 | 0.411 | 0.183 |
| Ethylbromide | 27 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.060 | 0.000 | 0.015 | 0.019 |
| Ethylene | 27 | 0.681 | 1.143 | 1.727 | 2.502 | 3.194 | 4.018 | 0.446 | 1.878 | 0.970 |
| Freon11 | 27 | 1.660 | 1.688 | 1.770 | 1.945 | 2.228 | 2.260 | 1.650 | 1.851 | 0.204 |
| Freon113 | 26 | 0.413 | 0.660 | 0.690 | 0.758 | 0.830 | 0.890 | 0.390 | 0.692 | 0.127 |
| Freon114 | 27 | 0.150 | 0.160 | 0.180 | 0.265 | 0.300 | 0.310 | 0.150 | 0.213 | 0.061 |
| Freon12 | 27 | 2.665 | 2.750 | 2.950 | 3.660 | 4.396 | 8.580 | 2.650 | 3.446 | 1.250 |
| Freon22 | 27 | 0.550 | 0.605 | 0.680 | 0.830 | 1.080 | 1.310 | 0.510 | 0.759 | 0.221 |
| Heptane | 27 | 0.173 | 0.205 | 0.290 | 0.428 | 0.522 | 0.800 | 0.110 | 0.321 | 0.156 |
| Hexachlorobutadiene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexane | 27 | 0.346 | 0.495 | 0.760 | 1.175 | 2.014 | 8.270 | 0.300 | 1.202 | 1.543 |
| Hexylbenzene | 26 | 0.000 | 0.000 | 0.000 | 0.000 | 0.025 | 0.040 | 0.000 | 0.005 | 0.011 |
| Indane | 27 | 0.040 | 0.050 | 0.060 | 0.080 | 0.104 | 0.160 | 0.030 | 0.069 | 0.032 |
| Isobutane | 27 | 0.445 | 0.830 | 1.050 | 1.540 | 1.758 | 4.580 | 0.420 | 1.251 | 0.812 |
| iso-Butylbenzene | 27 | 0.010 | 0.020 | 0.020 | 0.030 | 0.034 | 0.040 | 0.010 | 0.024 | 0.009 |
| Isopentane | 27 | 1.573 | 1.750 | 2.400 | 3.430 | 5.344 | 6.750 | 1.460 | 2.930 | 1.490 |
| Isoprene | 27 | 0.000 | 0.055 | 0.120 | 0.245 | 0.866 | 1.400 | 0.000 | 0.279 | 0.379 |
| iso-Propylbenzene | 27 | 0.030 | 0.040 | 0.040 | 0.052 | 0.070 | 0.090 | 0.020 | 0.047 | 0.016 |

## Table 43 VOC Annual Statistics at Kingston (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| m and p-Xylene | 27 | 0.510 | 0.735 | 0.986 | 1.460 | 2.028 | 2.390 | 0.480 | 1.156 | 0.553 |
| Methylcyclohexane | 27 | 0.080 | 0.110 | 0.150 | 0.210 | 0.252 | 0.540 | 0.070 | 0.168 | 0.095 |
| Methylcyclopentane | 27 | 0.146 | 0.250 | 0.340 | 0.440 | 0.580 | 1.390 | 0.140 | 0.380 | 0.246 |
| Naphthalene | 21 | 0.070 | 0.120 | 0.160 | 0.500 | 0.680 | 1.530 | 0.040 | 0.348 | 0.387 |
| n-Butylbenzene | 27 | 0.020 | 0.030 | 0.030 | 0.040 | 0.064 | 0.100 | 0.020 | 0.040 | 0.019 |
| Nonane | 27 | 0.083 | 0.140 | 0.206 | 0.275 | 0.358 | 0.600 | 0.050 | 0.228 | 0.132 |
| n-Propylbenzene | 27 | 0.063 | 0.080 | 0.090 | 0.128 | 0.170 | 0.220 | 0.050 | 0.109 | 0.044 |
| Octane | 27 | 0.080 | 0.110 | 0.130 | 0.230 | 0.294 | 0.460 | 0.070 | 0.174 | 0.094 |
| o-Xylene | 27 | 0.179 | 0.260 | 0.348 | 0.505 | 0.702 | 0.840 | 0.170 | 0.403 | 0.194 |
| p-Cymene | 27 | 0.000 | 0.025 | 0.040 | 0.055 | 0.090 | 0.110 | 0.000 | 0.044 | 0.031 |
| Pentane | 27 | 0.743 | 0.905 | 1.180 | 1.690 | 1.885 | 2.890 | 0.550 | 1.338 | 0.553 |
| Propane | 27 | 1.819 | 2.150 | 4.930 | 6.360 | 12.608 | 26.690 | 1.000 | 6.139 | 6.390 |
| Propylene | 27 | 0.223 | 0.275 | 0.420 | 0.605 | 0.804 | 1.300 | 0.170 | 0.476 | 0.262 |
| sec-Butylbenzene | 27 | 0.012 | 0.020 | 0.020 | 0.030 | 0.030 | 0.040 | 0.010 | 0.023 | 0.007 |
| Styrene | 25 | 0.012 | 0.110 | 0.190 | 0.300 | 0.494 | 1.580 | 0.000 | 0.290 | 0.336 |
| tert-Butylbenzene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.000 | 0.004 | 0.008 |
| Tetrachloroethylene | 27 | 0.282 | 0.430 | 0.590 | 1.005 | 1.738 | 5.890 | 0.260 | 0.973 | 1.102 |
| Toluene | 27 | 0.887 | 1.195 | 1.750 | 2.480 | 3.538 | 7.850 | 0.630 | 2.172 | 1.472 |
| trans-1,2-Dichloroethylene | 27 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.000 | 0.016 | 0.018 |
| trans-1,2-Dimethylcyclohe | 26 | 0.000 | 0.020 | 0.035 | 0.059 | 0.090 | 0.140 | 0.000 | 0.043 | 0.035 |
| trans-1,3-Dichloropropene | 26 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.020 | 0.000 | 0.003 | 0.007 |
| trans-1,4-Dimethylcyclohe | 27 | 0.010 | 0.020 | 0.030 | 0.040 | 0.064 | 0.100 | 0.010 | 0.034 | 0.022 |
| trans-2-Butene | 27 | 0.073 | 0.090 | 0.110 | 0.155 | 0.234 | 0.600 | 0.070 | 0.145 | 0.106 |
| trans-2-Heptene | 27 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.050 | 0.000 | 0.016 | 0.018 |
| trans-2-Hexene | 27 | 0.005 | 0.025 | 0.030 | 0.045 | 0.070 | 0.100 | 0.000 | 0.038 | 0.022 |
| trans-2-Octene | 15 | 0.000 | 0.000 | 0.000 | 0.000 | 0.022 | 0.030 | 0.000 | 0.005 | 0.011 |
| trans-2-Pentene | 27 | 0.040 | 0.056 | 0.086 | 0.145 | 0.212 | 0.420 | 0.030 | 0.116 | 0.092 |
| trans-3-Heptene | 27 | 0.000 | 0.000 | 0.000 | 0.000 | 0.008 | 0.030 | 0.000 | 0.003 | 0.008 |
| trans-3-Methyl-2-pentene | 27 | 0.000 | 0.000 | 0.000 | 0.015 | 0.050 | 0.090 | 0.000 | 0.014 | 0.026 |
| trans-4-Methyl-2-pentene | 27 | 0.000 | 0.000 | 0.000 | 0.010 | 0.028 | 0.132 | 0.000 | 0.011 | 0.028 |
| Trichloroethylene | 27 | 0.040 | 0.055 | 0.070 | 0.095 | 0.126 | 0.180 | 0.020 | 0.079 | 0.036 |
| Undecane | 27 | 0.106 | 0.200 | 0.300 | 0.380 | 0.684 | 2.230 | 0.070 | 0.419 | 0.464 |
| Vinylchloride | 27 | 0.000 | 0.000 | 0.020 | 0.030 | 0.030 | 0.040 | 0.000 | 0.017 | 0.013 |

*Note: VOC sites are operated by Environment Canada.*

## Table 44 VOC Annual Statistics at Kitchener (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 52 | 0.286 | 0.330 | 0.350 | 0.370 | 0.390 | 0.420 | 0.250 | 0.350 | 0.036 |
| 1,1,2,2-Tetrachloroethane | 52 | 0.011 | 0.030 | 0.060 | 0.070 | 0.070 | 0.090 | 0.000 | 0.051 | 0.022 |
| 1,1,2-Trichloroethane | 52 | 0.000 | 0.020 | 0.050 | 0.070 | 0.080 | 0.110 | 0.000 | 0.046 | 0.031 |
| 1,1-Dichloroethane | 52 | 0.000 | 0.000 | 0.040 | 0.050 | 0.059 | 0.060 | 0.000 | 0.031 | 0.023 |
| 1,1-Dichloroethylene | 52 | 0.011 | 0.030 | 0.070 | 0.090 | 0.100 | 0.110 | 0.000 | 0.064 | 0.031 |
| 1,2,3-Trimethylbenzene | 52 | 0.056 | 0.100 | 0.150 | 0.233 | 0.387 | 0.900 | 0.030 | 0.201 | 0.172 |
| 1,2,4-Trichlorobenzene | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 52 | 0.227 | 0.363 | 0.580 | 1.000 | 1.508 | 3.990 | 0.080 | 0.827 | 0.771 |
| 1,2-Dichlorobenzene | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 52 | 0.050 | 0.068 | 0.080 | 0.080 | 0.090 | 0.100 | 0.050 | 0.074 | 0.013 |
| 1,2-Dichloropropane | 52 | 0.000 | 0.000 | 0.000 | 0.043 | 0.060 | 0.070 | 0.000 | 0.021 | 0.025 |
| 1,2-Diethylbenzene | 52 | 0.010 | 0.020 | 0.030 | 0.040 | 0.049 | 0.080 | 0.000 | 0.031 | 0.015 |
| 1,3,5-Trimethylbenzene | 52 | 0.076 | 0.120 | 0.190 | 0.330 | 0.508 | 1.260 | 0.020 | 0.271 | 0.246 |
| 1,3-Butadiene | 52 | 0.060 | 0.088 | 0.110 | 0.150 | 0.180 | 0.670 | 0.050 | 0.134 | 0.099 |
| 1,3-Dichlorobenzene | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 52 | 0.020 | 0.030 | 0.050 | 0.070 | 0.099 | 0.220 | 0.010 | 0.058 | 0.041 |
| 1,4-Dichlorobenzene | 52 | 0.040 | 0.050 | 0.080 | 0.113 | 0.188 | 0.350 | 0.030 | 0.102 | 0.071 |
| 1,4-Dichlorobutane | 52 | 0.000 | 0.000 | 0.000 | 0.008 | 0.039 | 0.060 | 0.000 | 0.009 | 0.017 |
| 1,4-Diethylbenzene | 52 | 0.056 | 0.080 | 0.140 | 0.190 | 0.266 | 0.700 | 0.020 | 0.158 | 0.123 |
| 1-Butene/Isobutene | 52 | 0.256 | 0.375 | 0.470 | 0.593 | 0.694 | 2.270 | 0.240 | 0.547 | 0.351 |
| 1-Butyne | 52 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.000 | 0.015 | 0.019 |
| 1-Decene | 38 | 0.000 | 0.000 | 0.000 | 0.078 | 0.110 | 0.250 | 0.000 | 0.037 | 0.057 |
| 1-Heptene | 38 | 0.000 | 0.095 | 0.130 | 0.170 | 0.222 | 0.390 | 0.000 | 0.141 | 0.080 |
| 1-Hexene | 52 | 0.101 | 0.170 | 0.200 | 0.260 | 0.279 | 0.450 | 0.000 | 0.215 | 0.086 |
| 1-Methylcyclohexene | 52 | 0.030 | 0.040 | 0.060 | 0.070 | 0.089 | 0.110 | 0.020 | 0.057 | 0.021 |
| 1-Methylcyclopentene | 52 | 0.026 | 0.040 | 0.060 | 0.080 | 0.100 | 0.270 | 0.000 | 0.066 | 0.046 |
| 1-Nonene | 38 | 0.000 | 0.000 | 0.000 | 0.000 | 0.056 | 0.110 | 0.000 | 0.014 | 0.029 |
| 1-Octene | 36 | 0.000 | 0.038 | 0.050 | 0.060 | 0.070 | 0.110 | 0.000 | 0.047 | 0.027 |
| 1-Pentene | 52 | 0.076 | 0.100 | 0.130 | 0.173 | 0.258 | 0.540 | 0.050 | 0.154 | 0.088 |
| 1-Propyne | 52 | 0.026 | 0.050 | 0.070 | 0.093 | 0.129 | 0.380 | 0.000 | 0.082 | 0.059 |
| 2,2,3-Trimethylbutane | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.070 | 0.000 | 0.005 | 0.014 |
| 2,2,4-Trimethylpentane | 52 | 0.151 | 0.278 | 0.410 | 0.595 | 1.117 | 2.590 | 0.130 | 0.559 | 0.510 |
| 2,2,5-Trimethylhexane | 52 | 0.010 | 0.020 | 0.030 | 0.043 | 0.079 | 0.150 | 0.010 | 0.041 | 0.032 |
| 2,2-Dimethylbutane | 52 | 0.076 | 0.130 | 0.185 | 0.273 | 0.338 | 0.790 | 0.050 | 0.216 | 0.137 |
| 2,2-Dimethylhexane | 52 | 0.010 | 0.020 | 0.030 | 0.040 | 0.059 | 0.080 | 0.000 | 0.033 | 0.018 |
| 2,2-Dimethylpentane | 52 | 0.020 | 0.038 | 0.050 | 0.070 | 0.090 | 0.220 | 0.000 | 0.057 | 0.039 |
| 2,2-Dimethylpropane | 52 | 0.030 | 0.040 | 0.060 | 0.070 | 0.079 | 0.120 | 0.020 | 0.055 | 0.021 |

## Table 44 VOC Annual Statistics at Kitchener (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 52 | 0.056 | 0.100 | 0.145 | 0.220 | 0.387 | 0.880 | 0.040 | 0.201 | 0.180 |
| 2,3-Dimethylbutane | 52 | 0.110 | 0.178 | 0.270 | 0.443 | 0.585 | 1.340 | 0.090 | 0.343 | 0.261 |
| 2,3-Dimethylpentane | 52 | 0.106 | 0.170 | 0.230 | 0.313 | 0.519 | 1.120 | 0.080 | 0.294 | 0.218 |
| 2,4-Dimethylhexane | 52 | 0.046 | 0.070 | 0.095 | 0.140 | 0.228 | 0.470 | 0.040 | 0.125 | 0.094 |
| 2,4-Dimethylpentane | 52 | 0.046 | 0.090 | 0.120 | 0.175 | 0.230 | 0.670 | 0.030 | 0.151 | 0.117 |
| 2,5-Dimethylhexane | 52 | 0.030 | 0.058 | 0.070 | 0.100 | 0.168 | 0.370 | 0.030 | 0.092 | 0.072 |
| 2-Ethyl-1-Butene | 52 | 0.000 | 0.000 | 0.020 | 0.030 | 0.050 | 0.130 | 0.000 | 0.025 | 0.030 |
| 2-Ethyltoluene | 52 | 0.066 | 0.108 | 0.160 | 0.250 | 0.379 | 0.930 | 0.050 | 0.215 | 0.179 |
| 2-Methyl-1-butene | 52 | 0.066 | 0.108 | 0.170 | 0.265 | 0.330 | 0.750 | 0.000 | 0.211 | 0.166 |
| 2-Methyl-2-butene | 52 | 0.100 | 0.150 | 0.195 | 0.283 | 0.473 | 1.210 | 0.080 | 0.268 | 0.228 |
| 2-Methylheptane | 52 | 0.070 | 0.108 | 0.150 | 0.213 | 0.380 | 0.670 | 0.050 | 0.192 | 0.142 |
| 2-Methylhexane | 52 | 0.166 | 0.228 | 0.345 | 0.505 | 0.765 | 1.690 | 0.120 | 0.446 | 0.329 |
| 2-Methylpentane | 52 | 0.507 | 0.700 | 1.075 | 1.718 | 2.160 | 7.060 | 0.360 | 1.404 | 1.193 |
| 3,6-Dimethyloctane | 52 | 0.000 | 0.000 | 0.030 | 0.043 | 0.078 | 0.180 | 0.000 | 0.030 | 0.036 |
| 3-Ethyltoluene | 52 | 0.147 | 0.230 | 0.360 | 0.598 | 0.900 | 2.450 | 0.090 | 0.511 | 0.468 |
| 3-Methyl-1-pentene | 52 | 0.000 | 0.000 | 0.040 | 0.060 | 0.079 | 0.120 | 0.000 | 0.032 | 0.033 |
| 3-Methylheptane | 52 | 0.060 | 0.098 | 0.140 | 0.200 | 0.319 | 0.670 | 0.040 | 0.175 | 0.138 |
| 3-Methylhexane | 52 | 0.176 | 0.240 | 0.385 | 0.523 | 0.760 | 1.980 | 0.000 | 0.467 | 0.367 |
| 3-Methylpentane | 52 | 0.328 | 0.460 | 0.690 | 1.120 | 1.398 | 4.600 | 0.240 | 0.919 | 0.795 |
| 4-Ethyltoluene | 52 | 0.086 | 0.140 | 0.205 | 0.343 | 0.523 | 1.190 | 0.060 | 0.276 | 0.227 |
| 4-Methyl-1-pentene | 52 | 0.000 | 0.000 | 0.035 | 0.060 | 0.079 | 0.120 | 0.000 | 0.033 | 0.033 |
| 4-Methylheptane | 52 | 0.000 | 0.038 | 0.060 | 0.090 | 0.155 | 0.290 | 0.000 | 0.074 | 0.067 |
| Acetylene | 52 | 0.686 | 1.106 | 1.519 | 1.974 | 2.322 | 9.088 | 0.574 | 1.711 | 1.249 |
| Benzene | 52 | 0.472 | 0.740 | 0.950 | 1.230 | 1.426 | 3.690 | 0.330 | 1.072 | 0.622 |
| Benzylchloride | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.000 | 0.001 | 0.006 |
| Bromodichloromethane | 38 | 0.043 | 0.073 | 0.095 | 0.100 | 0.126 | 0.180 | 0.000 | 0.091 | 0.035 |
| Bromoform | 52 | 0.030 | 0.038 | 0.060 | 0.070 | 0.079 | 0.090 | 0.020 | 0.054 | 0.019 |
| Bromomethane | 52 | 0.090 | 0.108 | 0.170 | 0.190 | 0.200 | 0.220 | 0.080 | 0.159 | 0.044 |
| Butane | 52 | 1.005 | 1.673 | 2.595 | 3.683 | 4.967 | 20.350 | 0.780 | 3.238 | 2.873 |
| Carbontetrachloride | 52 | 0.310 | 0.568 | 0.620 | 0.680 | 0.709 | 0.740 | 0.310 | 0.591 | 0.129 |
| Chlorobenzene | 52 | 0.026 | 0.030 | 0.060 | 0.060 | 0.070 | 0.080 | 0.020 | 0.050 | 0.016 |
| Chloroethane | 52 | 0.080 | 0.100 | 0.125 | 0.170 | 0.198 | 0.270 | 0.050 | 0.136 | 0.048 |
| Chloroform | 52 | 0.080 | 0.098 | 0.120 | 0.143 | 0.170 | 0.270 | 0.070 | 0.128 | 0.043 |
| Chloromethane | 52 | 1.010 | 1.128 | 1.165 | 1.213 | 1.249 | 1.400 | 0.920 | 1.163 | 0.087 |
| cis-1,2-Dichloroethylene | 52 | 0.000 | 0.000 | 0.040 | 0.050 | 0.060 | 0.070 | 0.000 | 0.033 | 0.023 |
| cis-1,2-Dimethylcyclohexa | 52 | 0.000 | 0.030 | 0.040 | 0.050 | 0.069 | 0.110 | 0.000 | 0.043 | 0.025 |
| cis-1,3-Dichloropropene | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.150 | 0.000 | 0.008 | 0.028 |

## Table 44 VOC Annual Statistics at Kitchener (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dimethylcyclohexa | 52 | 0.020 | 0.040 | 0.055 | 0.080 | 0.136 | 0.200 | 0.010 | 0.067 | 0.045 |
| cis-1,4/t-1,3-Dimethylcycl | 52 | 0.000 | 0.020 | 0.030 | 0.030 | 0.059 | 0.100 | 0.000 | 0.028 | 0.021 |
| cis-2-Butene | 52 | 0.066 | 0.090 | 0.130 | 0.170 | 0.209 | 0.710 | 0.050 | 0.154 | 0.118 |
| cis-2-Heptene | 52 | 0.000 | 0.000 | 0.040 | 0.060 | 0.080 | 0.120 | 0.000 | 0.037 | 0.034 |
| cis-2-Hexene | 52 | 0.000 | 0.000 | 0.025 | 0.060 | 0.080 | 0.170 | 0.000 | 0.036 | 0.041 |
| cis-2-Pentene | 52 | 0.070 | 0.100 | 0.125 | 0.163 | 0.229 | 0.520 | 0.060 | 0.148 | 0.087 |
| cis-3-Methyl-2-pentene | 52 | 0.000 | 0.020 | 0.040 | 0.053 | 0.090 | 0.190 | 0.000 | 0.045 | 0.042 |
| cis-4-Methyl-2-pentene | 52 | 0.000 | 0.000 | 0.000 | 0.050 | 0.080 | 0.160 | 0.000 | 0.026 | 0.039 |
| Cyclohexane | 52 | 0.047 | 0.100 | 0.130 | 0.183 | 0.248 | 0.560 | 0.000 | 0.153 | 0.102 |
| Cyclohexene | 52 | 0.000 | 0.000 | 0.030 | 0.053 | 0.070 | 0.090 | 0.000 | 0.030 | 0.031 |
| Cyclopentane | 52 | 0.096 | 0.160 | 0.240 | 0.343 | 0.596 | 1.140 | 0.070 | 0.301 | 0.217 |
| Cyclopentene | 52 | 0.020 | 0.038 | 0.055 | 0.070 | 0.099 | 0.190 | 0.020 | 0.059 | 0.034 |
| Decane | 52 | 0.096 | 0.138 | 0.240 | 0.413 | 0.625 | 1.780 | 0.070 | 0.363 | 0.365 |
| Dibromochloromethane | 44 | 0.020 | 0.030 | 0.060 | 0.080 | 0.097 | 0.130 | 0.000 | 0.058 | 0.031 |
| Dibromomethane | 52 | 0.000 | 0.060 | 0.105 | 0.130 | 0.140 | 0.230 | 0.000 | 0.094 | 0.051 |
| Dichloromethane | 52 | 0.241 | 0.330 | 0.450 | 0.633 | 1.116 | 2.970 | 0.210 | 0.593 | 0.476 |
| Dodecane | 52 | 0.036 | 0.060 | 0.080 | 0.113 | 0.159 | 0.340 | 0.010 | 0.103 | 0.071 |
| EDB | 52 | 0.016 | 0.030 | 0.060 | 0.080 | 0.090 | 0.120 | 0.000 | 0.058 | 0.028 |
| Ethane | 52 | 1.691 | 2.604 | 2.996 | 4.117 | 4.827 | 9.314 | 1.235 | 3.390 | 1.442 |
| Ethylbenzene | 52 | 0.200 | 0.368 | 0.585 | 0.813 | 1.182 | 16.930 | 0.190 | 0.988 | 2.302 |
| Ethylbromide | 52 | 0.000 | 0.000 | 0.040 | 0.043 | 0.050 | 0.060 | 0.000 | 0.027 | 0.022 |
| Ethylene | 52 | 0.909 | 1.316 | 1.901 | 2.490 | 3.301 | 8.710 | 0.696 | 2.148 | 1.317 |
| Freon11 | 52 | 1.626 | 1.678 | 1.735 | 1.920 | 2.019 | 2.130 | 1.580 | 1.792 | 0.148 |
| Freon113 | 49 | 0.410 | 0.660 | 0.700 | 0.720 | 0.754 | 0.800 | 0.400 | 0.670 | 0.096 |
| Freon114 | 52 | 0.150 | 0.188 | 0.250 | 0.283 | 0.309 | 0.320 | 0.150 | 0.240 | 0.055 |
| Freon12 | 52 | 2.596 | 2.708 | 2.840 | 3.013 | 3.149 | 4.220 | 2.510 | 2.889 | 0.286 |
| Freon22 | 52 | 0.500 | 0.585 | 0.670 | 0.803 | 0.966 | 1.530 | 0.480 | 0.723 | 0.214 |
| Heptane | 52 | 0.166 | 0.248 | 0.355 | 0.513 | 0.798 | 1.630 | 0.120 | 0.445 | 0.326 |
| Hexachlorobutadiene | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexane | 52 | 0.350 | 0.550 | 0.730 | 1.090 | 1.546 | 4.200 | 0.260 | 0.936 | 0.728 |
| Hexylbenzene | 44 | 0.000 | 0.000 | 0.000 | 0.040 | 0.060 | 0.070 | 0.000 | 0.019 | 0.026 |
| Indane | 52 | 0.040 | 0.060 | 0.085 | 0.130 | 0.188 | 0.460 | 0.020 | 0.108 | 0.083 |
| Isobutane | 52 | 0.541 | 0.868 | 1.210 | 1.685 | 2.130 | 7.250 | 0.370 | 1.484 | 1.115 |
| iso-Butylbenzene | 52 | 0.010 | 0.020 | 0.030 | 0.040 | 0.050 | 0.100 | 0.010 | 0.032 | 0.017 |
| Isopentane | 52 | 1.342 | 1.845 | 2.840 | 4.400 | 5.826 | 16.830 | 1.050 | 3.673 | 2.953 |
| Isoprene | 50 | 0.045 | 0.080 | 0.145 | 0.373 | 0.513 | 1.300 | 0.040 | 0.244 | 0.239 |
| iso-Propylbenzene | 52 | 0.030 | 0.048 | 0.060 | 0.080 | 0.100 | 0.230 | 0.020 | 0.068 | 0.040 |

## Table 44 VOC Annual Statistics at Kitchener (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| m and p-Xylene | 52 | 0.549 | 1.020 | 1.565 | 2.240 | 3.317 | 12.720 | 0.470 | 2.123 | 2.105 |
| Methylcyclohexane | 52 | 0.066 | 0.120 | 0.170 | 0.260 | 0.425 | 0.810 | 0.060 | 0.223 | 0.169 |
| Methylcyclopentane | 52 | 0.147 | 0.238 | 0.340 | 0.515 | 0.693 | 1.820 | 0.110 | 0.429 | 0.353 |
| Naphthalene | 25 | 0.134 | 0.160 | 0.300 | 0.390 | 0.666 | 1.760 | 0.030 | 0.375 | 0.356 |
| n-Butylbenzene | 52 | 0.020 | 0.030 | 0.045 | 0.060 | 0.080 | 0.200 | 0.010 | 0.051 | 0.035 |
| Nonane | 52 | 0.070 | 0.108 | 0.180 | 0.253 | 0.349 | 1.000 | 0.070 | 0.234 | 0.201 |
| n-Propylbenzene | 52 | 0.060 | 0.090 | 0.135 | 0.210 | 0.319 | 0.780 | 0.040 | 0.180 | 0.145 |
| Octane | 52 | 0.060 | 0.108 | 0.160 | 0.200 | 0.336 | 0.650 | 0.040 | 0.186 | 0.135 |
| o-Xylene | 52 | 0.197 | 0.338 | 0.540 | 0.743 | 0.999 | 3.950 | 0.170 | 0.673 | 0.629 |
| p-Cymene | 52 | 0.000 | 0.030 | 0.055 | 0.073 | 0.110 | 0.190 | 0.000 | 0.060 | 0.043 |
| Pentane | 52 | 0.860 | 1.288 | 1.890 | 2.520 | 4.424 | 10.370 | 0.680 | 2.370 | 1.956 |
| Propane | 52 | 1.344 | 1.940 | 2.790 | 3.533 | 4.887 | 10.520 | 0.880 | 3.125 | 1.793 |
| Propylene | 52 | 0.280 | 0.403 | 0.555 | 0.793 | 1.018 | 3.630 | 0.270 | 0.676 | 0.535 |
| sec-Butylbenzene | 52 | 0.010 | 0.020 | 0.030 | 0.040 | 0.059 | 0.110 | 0.010 | 0.035 | 0.019 |
| Styrene | 50 | 0.055 | 0.083 | 0.120 | 0.198 | 0.294 | 0.540 | 0.000 | 0.163 | 0.117 |
| tert-Butylbenzene | 52 | 0.000 | 0.000 | 0.000 | 0.030 | 0.030 | 0.070 | 0.000 | 0.013 | 0.017 |
| Tetrachloroethylene | 52 | 0.106 | 0.178 | 0.210 | 0.320 | 0.789 | 1.740 | 0.080 | 0.334 | 0.314 |
| Toluene | 52 | 1.186 | 1.883 | 2.510 | 4.230 | 9.159 | 20.040 | 0.890 | 4.028 | 3.945 |
| trans-1,2-Dichloroethylene | 52 | 0.000 | 0.018 | 0.040 | 0.040 | 0.050 | 0.060 | 0.000 | 0.030 | 0.019 |
| trans-1,2-Dimethylcyclohe | 52 | 0.000 | 0.015 | 0.040 | 0.050 | 0.088 | 0.150 | 0.000 | 0.041 | 0.037 |
| trans-1,3-Dichloropropene | 52 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.170 | 0.000 | 0.017 | 0.033 |
| trans-1,4-Dimethylcyclohe | 52 | 0.010 | 0.020 | 0.030 | 0.030 | 0.059 | 0.110 | 0.000 | 0.030 | 0.021 |
| trans-2-Butene | 52 | 0.070 | 0.090 | 0.125 | 0.180 | 0.220 | 0.840 | 0.060 | 0.165 | 0.139 |
| trans-2-Heptene | 52 | 0.000 | 0.000 | 0.030 | 0.050 | 0.060 | 0.100 | 0.000 | 0.029 | 0.028 |
| trans-2-Hexene | 52 | 0.000 | 0.020 | 0.050 | 0.060 | 0.079 | 0.200 | 0.000 | 0.049 | 0.041 |
| trans-2-Octene | 14 | 0.000 | 0.000 | 0.000 | 0.000 | 0.027 | 0.050 | 0.000 | 0.007 | 0.015 |
| trans-2-Pentene | 52 | 0.030 | 0.060 | 0.115 | 0.195 | 0.287 | 0.750 | 0.020 | 0.158 | 0.149 |
| trans-3-Heptene | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.019 | 0.050 | 0.000 | 0.004 | 0.010 |
| trans-3-Methyl-2-pentene | 52 | 0.000 | 0.000 | 0.000 | 0.040 | 0.079 | 0.170 | 0.000 | 0.025 | 0.042 |
| trans-4-Methyl-2-pentene | 52 | 0.000 | 0.000 | 0.000 | 0.000 | 0.018 | 0.030 | 0.000 | 0.003 | 0.008 |
| Trichloroethylene | 52 | 0.040 | 0.088 | 0.140 | 0.245 | 0.484 | 0.690 | 0.030 | 0.205 | 0.176 |
| Undecane | 52 | 0.060 | 0.110 | 0.175 | 0.263 | 0.516 | 1.180 | 0.040 | 0.252 | 0.255 |
| Vinylchloride | 52 | 0.000 | 0.020 | 0.030 | 0.033 | 0.040 | 0.040 | 0.000 | 0.026 | 0.012 |

*Note: VOC sites are operated by Environment Canada.*

## Table 45 VOC Annual Statistics at London (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 25 | 0.320 | 0.340 | 0.360 | 0.390 | 0.406 | 0.488 | 0.310 | 0.370 | 0.043 |
| 1,1,2,2-Tetrachloroethane | 25 | 0.004 | 0.020 | 0.030 | 0.050 | 0.070 | 0.074 | 0.000 | 0.036 | 0.022 |
| 1,1,2-Trichloroethane | 25 | 0.000 | 0.000 | 0.000 | 0.040 | 0.052 | 0.094 | 0.000 | 0.021 | 0.029 |
| 1,1-Dichloroethane | 25 | 0.000 | 0.000 | 0.000 | 0.040 | 0.046 | 0.070 | 0.000 | 0.018 | 0.022 |
| 1,1-Dichloroethylene | 25 | 0.000 | 0.020 | 0.030 | 0.066 | 0.079 | 0.090 | 0.000 | 0.036 | 0.030 |
| 1,2,3-Trimethylbenzene | 25 | 0.050 | 0.060 | 0.080 | 0.101 | 0.140 | 0.206 | 0.041 | 0.089 | 0.040 |
| 1,2,4-Trichlorobenzene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 25 | 0.154 | 0.230 | 0.300 | 0.402 | 0.556 | 0.932 | 0.121 | 0.350 | 0.186 |
| 1,2-Dichlorobenzene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.050 | 0.000 | 0.002 | 0.010 |
| 1,2-Dichloroethane | 25 | 0.050 | 0.060 | 0.070 | 0.080 | 0.086 | 0.113 | 0.000 | 0.068 | 0.020 |
| 1,2-Dichloropropane | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.000 | 0.002 | 0.008 |
| 1,2-Diethylbenzene | 25 | 0.000 | 0.010 | 0.018 | 0.020 | 0.026 | 0.088 | 0.000 | 0.017 | 0.018 |
| 1,3,5-Trimethylbenzene | 25 | 0.066 | 0.080 | 0.110 | 0.140 | 0.191 | 0.324 | 0.060 | 0.121 | 0.061 |
| 1,3-Butadiene | 25 | 0.060 | 0.080 | 0.100 | 0.120 | 0.168 | 0.190 | 0.050 | 0.105 | 0.040 |
| 1,3-Dichlorobenzene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 25 | 0.020 | 0.020 | 0.030 | 0.037 | 0.048 | 0.076 | 0.018 | 0.031 | 0.014 |
| 1,4-Dichlorobenzene | 25 | 0.040 | 0.044 | 0.050 | 0.070 | 0.084 | 0.100 | 0.030 | 0.057 | 0.019 |
| 1,4-Dichlorobutane | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.000 | 0.003 | 0.010 |
| 1,4-Diethylbenzene | 25 | 0.050 | 0.060 | 0.070 | 0.098 | 0.120 | 0.198 | 0.048 | 0.081 | 0.034 |
| 1-Butene/Isobutene | 25 | 0.304 | 0.360 | 0.462 | 0.629 | 0.803 | 1.040 | 0.290 | 0.523 | 0.209 |
| 1-Butyne | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.100 | 0.000 | 0.007 | 0.021 |
| 1-Decene | 9 | 0.000 | 0.000 | 0.000 | 0.040 | 0.052 | 0.059 | 0.000 | 0.020 | 0.025 |
| 1-Heptene | 9 | 0.020 | 0.080 | 0.110 | 0.119 | 0.196 | 0.210 | 0.000 | 0.109 | 0.065 |
| 1-Hexene | 25 | 0.018 | 0.100 | 0.180 | 0.230 | 0.263 | 0.290 | 0.000 | 0.166 | 0.082 |
| 1-Methylcyclohexene | 25 | 0.004 | 0.030 | 0.040 | 0.056 | 0.060 | 0.103 | 0.000 | 0.043 | 0.024 |
| 1-Methylcyclopentene | 25 | 0.030 | 0.030 | 0.044 | 0.050 | 0.070 | 0.082 | 0.020 | 0.046 | 0.016 |
| 1-Nonene | 9 | 0.000 | 0.000 | 0.030 | 0.060 | 0.096 | 0.160 | 0.000 | 0.046 | 0.052 |
| 1-Octene | 9 | 0.034 | 0.050 | 0.053 | 0.080 | 0.112 | 0.153 | 0.030 | 0.070 | 0.038 |
| 1-Pentene | 25 | 0.070 | 0.080 | 0.111 | 0.162 | 0.180 | 0.243 | 0.060 | 0.123 | 0.048 |
| 1-Propyne | 21 | 0.040 | 0.050 | 0.060 | 0.090 | 0.575 | 4.490 | 0.000 | 0.387 | 1.021 |
| 2,2,3-Trimethylbutane | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2,2,4-Trimethylpentane | 25 | 0.120 | 0.190 | 0.240 | 0.372 | 0.514 | 0.639 | 0.100 | 0.295 | 0.148 |
| 2,2,5-Trimethylhexane | 25 | 0.010 | 0.020 | 0.020 | 0.028 | 0.043 | 0.060 | 0.000 | 0.023 | 0.013 |
| 2,2-Dimethylbutane | 25 | 0.080 | 0.096 | 0.120 | 0.185 | 0.222 | 0.289 | 0.070 | 0.144 | 0.060 |
| 2,2-Dimethylhexane | 25 | 0.000 | 0.010 | 0.010 | 0.027 | 0.036 | 0.060 | 0.000 | 0.018 | 0.014 |
| 2,2-Dimethylpentane | 25 | 0.000 | 0.020 | 0.030 | 0.050 | 0.057 | 0.070 | 0.000 | 0.030 | 0.020 |
| 2,2-Dimethylpropane | 25 | 0.020 | 0.030 | 0.036 | 0.050 | 0.060 | 0.070 | 0.000 | 0.038 | 0.016 |

## Table 45 VOC Annual Statistics at London (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 25 | 0.044 | 0.070 | 0.110 | 0.140 | 0.190 | 0.280 | 0.040 | 0.110 | 0.060 |
| 2,3-Dimethylbutane | 25 | 0.102 | 0.150 | 0.178 | 0.340 | 0.398 | 0.477 | 0.080 | 0.227 | 0.118 |
| 2,3-Dimethylpentane | 25 | 0.086 | 0.130 | 0.188 | 0.210 | 0.357 | 0.510 | 0.070 | 0.197 | 0.103 |
| 2,4-Dimethylhexane | 25 | 0.032 | 0.050 | 0.060 | 0.090 | 0.120 | 0.199 | 0.030 | 0.075 | 0.041 |
| 2,4-Dimethylpentane | 25 | 0.042 | 0.060 | 0.090 | 0.110 | 0.158 | 0.181 | 0.030 | 0.093 | 0.041 |
| 2,5-Dimethylhexane | 25 | 0.030 | 0.040 | 0.050 | 0.068 | 0.088 | 0.120 | 0.000 | 0.055 | 0.026 |
| 2-Ethyl-1-Butene | 25 | 0.000 | 0.010 | 0.010 | 0.016 | 0.020 | 0.036 | 0.000 | 0.011 | 0.009 |
| 2-Ethyltoluene | 25 | 0.056 | 0.070 | 0.092 | 0.110 | 0.154 | 0.210 | 0.050 | 0.100 | 0.041 |
| 2-Methyl-1-butene | 25 | 0.010 | 0.080 | 0.100 | 0.152 | 0.252 | 0.440 | 0.000 | 0.131 | 0.097 |
| 2-Methyl-2-butene | 25 | 0.110 | 0.140 | 0.160 | 0.240 | 0.283 | 0.320 | 0.090 | 0.180 | 0.065 |
| 2-Methylheptane | 25 | 0.044 | 0.070 | 0.108 | 0.130 | 0.186 | 0.268 | 0.000 | 0.115 | 0.059 |
| 2-Methylhexane | 25 | 0.152 | 0.200 | 0.280 | 0.340 | 0.538 | 0.960 | 0.100 | 0.313 | 0.182 |
| 2-Methylpentane | 25 | 0.486 | 0.598 | 0.756 | 1.160 | 1.430 | 2.430 | 0.310 | 0.917 | 0.459 |
| 3,6-Dimethyloctane | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.000 | 0.002 | 0.009 |
| 3-Ethyltoluene | 25 | 0.120 | 0.170 | 0.220 | 0.250 | 0.380 | 0.572 | 0.109 | 0.233 | 0.112 |
| 3-Methyl-1-pentene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.050 | 0.000 | 0.004 | 0.013 |
| 3-Methylheptane | 25 | 0.060 | 0.070 | 0.083 | 0.120 | 0.167 | 0.226 | 0.050 | 0.105 | 0.047 |
| 3-Methylhexane | 25 | 0.152 | 0.210 | 0.306 | 0.390 | 0.610 | 1.290 | 0.130 | 0.362 | 0.247 |
| 3-Methylpentane | 25 | 0.344 | 0.414 | 0.530 | 0.830 | 1.024 | 4.390 | 0.230 | 0.760 | 0.797 |
| 4-Ethyltoluene | 25 | 0.070 | 0.090 | 0.112 | 0.138 | 0.190 | 0.292 | 0.060 | 0.128 | 0.055 |
| 4-Methyl-1-pentene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.070 | 0.000 | 0.008 | 0.019 |
| 4-Methylheptane | 25 | 0.000 | 0.030 | 0.040 | 0.060 | 0.070 | 0.094 | 0.000 | 0.041 | 0.026 |
| Acetylene | 25 | 0.880 | 1.141 | 1.530 | 2.148 | 4.049 | 43.100 | 0.655 | 3.803 | 8.569 |
| Benzene | 25 | 0.552 | 0.690 | 1.000 | 1.170 | 1.639 | 2.580 | 0.530 | 1.024 | 0.478 |
| Benzylchloride | 25 | 0.020 | 0.020 | 0.030 | 0.050 | 0.052 | 0.060 | 0.020 | 0.035 | 0.014 |
| Bromodichloromethane | 11 | 0.000 | 0.000 | 0.060 | 0.075 | 0.086 | 0.100 | 0.000 | 0.047 | 0.039 |
| Bromoform | 25 | 0.030 | 0.030 | 0.032 | 0.060 | 0.070 | 0.077 | 0.030 | 0.043 | 0.017 |
| Bromomethane | 25 | 0.090 | 0.100 | 0.100 | 0.170 | 0.185 | 0.200 | 0.090 | 0.127 | 0.040 |
| Butane | 25 | 1.482 | 1.764 | 2.560 | 3.380 | 4.350 | 6.390 | 1.190 | 2.815 | 1.220 |
| Carbontetrachloride | 25 | 0.388 | 0.560 | 0.608 | 0.680 | 0.734 | 0.780 | 0.339 | 0.610 | 0.106 |
| Chlorobenzene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Chloroethane | 25 | 0.008 | 0.040 | 0.056 | 0.090 | 0.110 | 0.123 | 0.000 | 0.064 | 0.034 |
| Chloroform | 25 | 0.072 | 0.080 | 0.084 | 0.120 | 0.139 | 0.169 | 0.070 | 0.100 | 0.029 |
| Chloromethane | 25 | 1.078 | 1.122 | 1.181 | 1.218 | 1.276 | 1.489 | 1.070 | 1.186 | 0.088 |
| cis-1,2-Dichloroethylene | 25 | 0.000 | 0.000 | 0.010 | 0.040 | 0.040 | 0.073 | 0.000 | 0.017 | 0.022 |
| cis-1,2-Dimethylcyclohexa | 21 | 0.000 | 0.020 | 0.030 | 0.040 | 0.050 | 0.084 | 0.000 | 0.029 | 0.020 |
| cis-1,3-Dichloropropene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.140 | 0.000 | 0.006 | 0.028 |

## Table 45 VOC Annual Statistics at London (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dimethylcyclohexa | 25 | 0.012 | 0.030 | 0.040 | 0.050 | 0.062 | 0.094 | 0.000 | 0.040 | 0.021 |
| cis-1,4/t-1,3-Dimethylcycl | 25 | 0.000 | 0.010 | 0.010 | 0.020 | 0.028 | 0.054 | 0.000 | 0.015 | 0.012 |
| cis-2-Butene | 25 | 0.070 | 0.080 | 0.090 | 0.140 | 0.186 | 0.360 | 0.058 | 0.123 | 0.065 |
| cis-2-Heptene | 25 | 0.000 | 0.000 | 0.000 | 0.050 | 0.076 | 0.116 | 0.000 | 0.025 | 0.038 |
| cis-2-Hexene | 25 | 0.000 | 0.000 | 0.000 | 0.020 | 0.026 | 0.069 | 0.000 | 0.008 | 0.016 |
| cis-2-Pentene | 25 | 0.060 | 0.070 | 0.092 | 0.140 | 0.173 | 0.200 | 0.050 | 0.106 | 0.043 |
| cis-3-Methyl-2-pentene | 25 | 0.000 | 0.000 | 0.030 | 0.038 | 0.049 | 0.070 | 0.000 | 0.025 | 0.019 |
| cis-4-Methyl-2-pentene | 25 | 0.000 | 0.000 | 0.070 | 0.086 | 0.146 | 0.230 | 0.000 | 0.068 | 0.061 |
| Cyclohexane | 25 | 0.044 | 0.080 | 0.118 | 0.212 | 0.410 | 1.940 | 0.020 | 0.241 | 0.389 |
| Cyclohexene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.018 | 0.093 | 0.000 | 0.007 | 0.021 |
| Cyclopentane | 25 | 0.074 | 0.128 | 0.146 | 0.249 | 0.308 | 0.390 | 0.060 | 0.180 | 0.089 |
| Cyclopentene | 25 | 0.020 | 0.022 | 0.030 | 0.050 | 0.060 | 0.070 | 0.020 | 0.037 | 0.016 |
| Decane | 25 | 0.044 | 0.070 | 0.094 | 0.150 | 0.190 | 0.330 | 0.040 | 0.114 | 0.070 |
| Dibromochloromethane | 23 | 0.000 | 0.020 | 0.020 | 0.045 | 0.082 | 0.136 | 0.000 | 0.038 | 0.035 |
| Dibromomethane | 25 | 0.050 | 0.050 | 0.060 | 0.100 | 0.116 | 0.130 | 0.050 | 0.075 | 0.028 |
| Dichloromethane | 25 | 0.200 | 0.260 | 0.340 | 0.470 | 0.625 | 0.950 | 0.190 | 0.394 | 0.185 |
| Dodecane | 25 | 0.030 | 0.040 | 0.060 | 0.090 | 0.124 | 0.180 | 0.020 | 0.071 | 0.042 |
| EDB | 25 | 0.000 | 0.020 | 0.020 | 0.050 | 0.076 | 0.143 | 0.000 | 0.038 | 0.035 |
| Ethane | 25 | 2.568 | 3.129 | 3.583 | 4.276 | 4.893 | 5.784 | 1.688 | 3.718 | 0.961 |
| Ethylbenzene | 25 | 0.202 | 0.260 | 0.340 | 0.440 | 0.610 | 0.880 | 0.140 | 0.377 | 0.173 |
| Ethylbromide | 25 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.040 | 0.000 | 0.013 | 0.018 |
| Ethylene | 25 | 1.076 | 1.712 | 2.231 | 2.977 | 4.229 | 4.761 | 0.980 | 2.445 | 1.078 |
| Freon11 | 25 | 1.616 | 1.660 | 1.710 | 1.830 | 1.852 | 1.980 | 1.610 | 1.736 | 0.098 |
| Freon113 | 24 | 0.390 | 0.610 | 0.681 | 0.704 | 0.762 | 0.810 | 0.380 | 0.638 | 0.126 |
| Freon114 | 25 | 0.150 | 0.150 | 0.160 | 0.251 | 0.276 | 0.295 | 0.150 | 0.196 | 0.055 |
| Freon12 | 25 | 2.412 | 2.610 | 2.710 | 2.920 | 2.972 | 3.543 | 2.380 | 2.761 | 0.247 |
| Freon22 | 25 | 0.462 | 0.510 | 0.550 | 0.720 | 0.805 | 0.858 | 0.440 | 0.620 | 0.135 |
| Heptane | 25 | 0.132 | 0.190 | 0.250 | 0.290 | 0.594 | 1.074 | 0.100 | 0.322 | 0.249 |
| Hexachlorobutadiene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexane | 25 | 0.356 | 0.450 | 0.632 | 0.910 | 1.388 | 9.630 | 0.240 | 1.078 | 1.819 |
| Hexylbenzene | 23 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.000 | 0.001 | 0.005 |
| Indane | 25 | 0.032 | 0.040 | 0.050 | 0.069 | 0.085 | 0.124 | 0.030 | 0.056 | 0.022 |
| Isobutane | 25 | 0.671 | 0.800 | 1.188 | 1.644 | 2.270 | 3.310 | 0.530 | 1.384 | 0.698 |
| iso-Butylbenzene | 25 | 0.010 | 0.010 | 0.020 | 0.020 | 0.026 | 0.030 | 0.000 | 0.018 | 0.007 |
| Isopentane | 25 | 1.286 | 1.820 | 2.260 | 3.250 | 4.646 | 6.445 | 1.190 | 2.665 | 1.324 |
| Isoprene | 25 | 0.040 | 0.060 | 0.094 | 0.140 | 0.346 | 0.510 | 0.040 | 0.141 | 0.133 |
| iso-Propylbenzene | 25 | 0.022 | 0.030 | 0.040 | 0.049 | 0.058 | 0.070 | 0.020 | 0.040 | 0.012 |

## Table 45 VOC Annual Statistics at London (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| m and p-Xylene | 25 | 0.482 | 0.650 | 0.840 | 1.240 | 1.745 | 2.620 | 0.360 | 1.017 | 0.541 |
| Methylcyclohexane | 25 | 0.050 | 0.060 | 0.110 | 0.162 | 0.218 | 0.332 | 0.030 | 0.128 | 0.081 |
| Methylcyclopentane | 25 | 0.152 | 0.200 | 0.268 | 0.320 | 0.462 | 1.210 | 0.090 | 0.303 | 0.214 |
| Naphthalene | 21 | 0.090 | 0.142 | 0.220 | 0.330 | 0.724 | 1.082 | 0.090 | 0.310 | 0.264 |
| n-Butylbenzene | 25 | 0.000 | 0.020 | 0.028 | 0.039 | 0.040 | 0.056 | 0.000 | 0.027 | 0.014 |
| Nonane | 25 | 0.050 | 0.060 | 0.094 | 0.122 | 0.146 | 0.260 | 0.040 | 0.100 | 0.052 |
| n-Propylbenzene | 25 | 0.051 | 0.060 | 0.080 | 0.110 | 0.136 | 0.184 | 0.040 | 0.088 | 0.035 |
| Octane | 25 | 0.060 | 0.080 | 0.130 | 0.170 | 0.195 | 0.384 | 0.060 | 0.133 | 0.072 |
| o-Xylene | 25 | 0.172 | 0.230 | 0.280 | 0.420 | 0.545 | 0.770 | 0.130 | 0.336 | 0.162 |
| p-Cymene | 25 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.050 | 0.000 | 0.017 | 0.017 |
| Pentane | 25 | 0.806 | 1.060 | 1.470 | 2.020 | 2.960 | 4.590 | 0.750 | 1.717 | 0.907 |
| Propane | 25 | 1.484 | 2.160 | 2.720 | 3.170 | 4.833 | 5.280 | 1.370 | 2.912 | 1.163 |
| Propylene | 25 | 0.326 | 0.390 | 0.470 | 0.679 | 0.938 | 1.489 | 0.290 | 0.587 | 0.302 |
| sec-Butylbenzene | 25 | 0.000 | 0.010 | 0.020 | 0.020 | 0.024 | 0.030 | 0.000 | 0.016 | 0.008 |
| Styrene | 23 | 0.000 | 0.045 | 0.060 | 0.100 | 0.130 | 0.230 | 0.000 | 0.073 | 0.054 |
| tert-Butylbenzene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Tetrachloroethylene | 25 | 0.104 | 0.132 | 0.206 | 0.250 | 0.406 | 0.700 | 0.080 | 0.227 | 0.143 |
| Toluene | 25 | 0.766 | 1.060 | 2.026 | 2.400 | 3.368 | 9.240 | 0.550 | 2.289 | 1.989 |
| trans-1,2-Dichloroethylene | 25 | 0.000 | 0.000 | 0.000 | 0.040 | 0.048 | 0.061 | 0.000 | 0.016 | 0.021 |
| trans-1,2-Dimethylcyclohe | 25 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.000 | 0.014 | 0.018 |
| trans-1,3-Dichloropropene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.150 | 0.000 | 0.011 | 0.033 |
| trans-1,4-Dimethylcyclohe | 25 | 0.002 | 0.010 | 0.012 | 0.020 | 0.021 | 0.055 | 0.000 | 0.016 | 0.011 |
| trans-2-Butene | 25 | 0.071 | 0.090 | 0.120 | 0.152 | 0.186 | 0.430 | 0.060 | 0.132 | 0.074 |
| trans-2-Heptene | 25 | 0.000 | 0.000 | 0.000 | 0.030 | 0.042 | 0.294 | 0.000 | 0.031 | 0.070 |
| trans-2-Hexene | 25 | 0.000 | 0.020 | 0.020 | 0.030 | 0.046 | 0.085 | 0.000 | 0.027 | 0.020 |
| trans-2-Octene | 16 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.000 | 0.009 | 0.015 |
| trans-2-Pentene | 25 | 0.030 | 0.040 | 0.060 | 0.080 | 0.165 | 0.240 | 0.026 | 0.079 | 0.054 |
| trans-3-Heptene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| trans-3-Methyl-2-pentene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.016 | 0.030 | 0.000 | 0.003 | 0.008 |
| trans-4-Methyl-2-pentene | 25 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Trichloroethylene | 25 | 0.032 | 0.070 | 0.090 | 0.130 | 0.308 | 0.750 | 0.030 | 0.144 | 0.163 |
| Undecane | 25 | 0.050 | 0.064 | 0.090 | 0.130 | 0.192 | 0.218 | 0.040 | 0.105 | 0.055 |
| Vinylchloride | 25 | 0.000 | 0.000 | 0.010 | 0.030 | 0.031 | 0.042 | 0.000 | 0.016 | 0.014 |

*Note: VOC sites are operated by Environment Canada.*

## Table 46 VOC Annual Statistics at Mississauga (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 56 | 0.360 | 0.390 | 0.410 | 0.443 | 0.476 | 0.690 | 0.340 | 0.424 | 0.062 |
| 1,1,2,2-Tetrachloroethane | 56 | 0.000 | 0.030 | 0.060 | 0.070 | 0.070 | 0.140 | 0.000 | 0.048 | 0.026 |
| 1,1,2-Trichloroethane | 56 | 0.000 | 0.018 | 0.050 | 0.060 | 0.065 | 0.100 | 0.000 | 0.039 | 0.027 |
| 1,1-Dichloroethane | 56 | 0.000 | 0.000 | 0.040 | 0.050 | 0.060 | 0.130 | 0.000 | 0.031 | 0.028 |
| 1,1-Dichloroethylene | 56 | 0.000 | 0.030 | 0.080 | 0.090 | 0.090 | 0.100 | 0.000 | 0.059 | 0.033 |
| 1,2,3-Trimethylbenzene | 56 | 0.030 | 0.080 | 0.130 | 0.220 | 0.290 | 0.380 | 0.020 | 0.154 | 0.096 |
| 1,2,4-Trichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 56 | 0.123 | 0.270 | 0.515 | 0.783 | 1.131 | 1.560 | 0.040 | 0.592 | 0.393 |
| 1,2-Dichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 56 | 0.060 | 0.070 | 0.080 | 0.090 | 0.105 | 0.133 | 0.050 | 0.081 | 0.017 |
| 1,2-Dichloropropane | 56 | 0.000 | 0.000 | 0.000 | 0.050 | 0.050 | 0.070 | 0.000 | 0.022 | 0.025 |
| 1,2-Diethylbenzene | 56 | 0.000 | 0.020 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.029 | 0.016 |
| 1,3,5-Trimethylbenzene | 56 | 0.048 | 0.095 | 0.177 | 0.270 | 0.405 | 0.530 | 0.020 | 0.201 | 0.129 |
| 1,3-Butadiene | 56 | 0.040 | 0.070 | 0.090 | 0.125 | 0.210 | 0.290 | 0.040 | 0.111 | 0.061 |
| 1,3-Dichlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 56 | 0.020 | 0.030 | 0.040 | 0.062 | 0.080 | 0.110 | 0.010 | 0.047 | 0.024 |
| 1,4-Dichlorobenzene | 56 | 0.039 | 0.050 | 0.070 | 0.100 | 0.135 | 0.230 | 0.030 | 0.080 | 0.044 |
| 1,4-Dichlorobutane | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.060 | 0.000 | 0.006 | 0.014 |
| 1,4-Diethylbenzene | 54 | 0.030 | 0.070 | 0.115 | 0.171 | 0.227 | 0.330 | 0.030 | 0.126 | 0.073 |
| 1-Butene/Isobutene | 56 | 0.238 | 0.330 | 0.435 | 0.593 | 0.800 | 4.970 | 0.180 | 0.580 | 0.658 |
| 1-Butyne | 56 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.040 | 0.000 | 0.014 | 0.017 |
| 1-Decene | 35 | 0.000 | 0.000 | 0.000 | 0.090 | 0.140 | 0.550 | 0.000 | 0.062 | 0.103 |
| 1-Heptene | 35 | 0.061 | 0.185 | 0.260 | 0.440 | 0.620 | 0.920 | 0.030 | 0.322 | 0.210 |
| 1-Hexene | 56 | 0.088 | 0.140 | 0.205 | 0.240 | 0.300 | 1.800 | 0.000 | 0.233 | 0.242 |
| 1-Methylcyclohexene | 56 | 0.020 | 0.040 | 0.060 | 0.070 | 0.075 | 0.130 | 0.000 | 0.056 | 0.025 |
| 1-Methylcyclopentene | 56 | 0.020 | 0.039 | 0.050 | 0.070 | 0.080 | 0.780 | 0.020 | 0.066 | 0.101 |
| 1-Nonene | 35 | 0.000 | 0.000 | 0.000 | 0.045 | 0.086 | 0.540 | 0.000 | 0.037 | 0.093 |
| 1-Octene | 35 | 0.000 | 0.035 | 0.050 | 0.050 | 0.070 | 0.500 | 0.000 | 0.055 | 0.081 |
| 1-Pentene | 56 | 0.058 | 0.090 | 0.120 | 0.163 | 0.235 | 5.950 | 0.000 | 0.244 | 0.782 |
| 1-Propyne | 51 | 0.000 | 0.040 | 0.060 | 0.080 | 0.130 | 0.150 | 0.000 | 0.064 | 0.041 |
| 2,2,3-Trimethylbutane | 56 | 0.000 | 0.000 | 0.000 | 0.020 | 0.040 | 0.080 | 0.000 | 0.012 | 0.020 |
| 2,2,4-Trimethylpentane | 56 | 0.128 | 0.268 | 0.335 | 0.525 | 0.800 | 3.970 | 0.080 | 0.480 | 0.552 |
| 2,2,5-Trimethylhexane | 56 | 0.010 | 0.028 | 0.040 | 0.057 | 0.080 | 0.120 | 0.000 | 0.043 | 0.025 |
| 2,2-Dimethylbutane | 56 | 0.088 | 0.148 | 0.220 | 0.333 | 0.430 | 0.800 | 0.050 | 0.264 | 0.151 |
| 2,2-Dimethylhexane | 56 | 0.010 | 0.020 | 0.040 | 0.053 | 0.090 | 0.100 | 0.000 | 0.044 | 0.026 |
| 2,2-Dimethylpentane | 56 | 0.020 | 0.040 | 0.060 | 0.110 | 0.175 | 0.270 | 0.000 | 0.086 | 0.063 |
| 2,2-Dimethylpropane | 56 | 0.020 | 0.040 | 0.060 | 0.080 | 0.090 | 0.220 | 0.010 | 0.063 | 0.035 |

## Table 46 VOC Annual Statistics at Mississauga (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 56 | 0.048 | 0.088 | 0.133 | 0.200 | 0.300 | 0.900 | 0.030 | 0.166 | 0.135 |
| 2,3-Dimethylbutane | 56 | 0.095 | 0.240 | 0.356 | 0.523 | 0.790 | 3.740 | 0.050 | 0.457 | 0.508 |
| 2,3-Dimethylpentane | 56 | 0.080 | 0.210 | 0.330 | 0.460 | 0.730 | 1.130 | 0.050 | 0.377 | 0.240 |
| 2,4-Dimethylhexane | 56 | 0.048 | 0.100 | 0.140 | 0.203 | 0.330 | 0.470 | 0.030 | 0.172 | 0.109 |
| 2,4-Dimethylpentane | 56 | 0.040 | 0.120 | 0.168 | 0.263 | 0.410 | 1.130 | 0.030 | 0.221 | 0.180 |
| 2,5-Dimethylhexane | 56 | 0.030 | 0.080 | 0.120 | 0.163 | 0.270 | 0.470 | 0.020 | 0.141 | 0.095 |
| 2-Ethyl-1-Butene | 56 | 0.000 | 0.000 | 0.012 | 0.020 | 0.035 | 0.980 | 0.000 | 0.033 | 0.130 |
| 2-Ethyltoluene | 56 | 0.040 | 0.080 | 0.146 | 0.230 | 0.310 | 0.380 | 0.030 | 0.164 | 0.097 |
| 2-Methyl-1-butene | 56 | 0.000 | 0.090 | 0.145 | 0.200 | 0.312 | 13.360 | 0.000 | 0.383 | 1.769 |
| 2-Methyl-2-butene | 56 | 0.068 | 0.110 | 0.160 | 0.270 | 0.375 | 17.030 | 0.050 | 0.495 | 2.253 |
| 2-Methylheptane | 56 | 0.068 | 0.218 | 0.350 | 0.517 | 0.795 | 1.480 | 0.040 | 0.429 | 0.335 |
| 2-Methylhexane | 56 | 0.138 | 0.438 | 0.755 | 1.165 | 1.805 | 3.480 | 0.070 | 0.927 | 0.735 |
| 2-Methylpentane | 56 | 0.408 | 1.123 | 1.700 | 2.143 | 4.165 | 10.070 | 0.230 | 2.086 | 1.833 |
| 3,6-Dimethyloctane | 56 | 0.000 | 0.020 | 0.038 | 0.063 | 0.085 | 0.180 | 0.000 | 0.045 | 0.038 |
| 3-Ethyltoluene | 56 | 0.085 | 0.168 | 0.324 | 0.510 | 0.730 | 0.900 | 0.040 | 0.370 | 0.234 |
| 3-Methyl-1-pentene | 56 | 0.000 | 0.000 | 0.005 | 0.060 | 0.070 | 0.860 | 0.000 | 0.043 | 0.115 |
| 3-Methylheptane | 56 | 0.058 | 0.170 | 0.290 | 0.488 | 0.680 | 1.410 | 0.040 | 0.362 | 0.281 |
| 3-Methylhexane | 56 | 0.088 | 0.495 | 0.849 | 1.263 | 2.020 | 3.500 | 0.050 | 1.008 | 0.777 |
| 3-Methylpentane | 56 | 0.278 | 0.708 | 1.021 | 1.513 | 2.685 | 5.940 | 0.160 | 1.366 | 1.170 |
| 4-Ethyltoluene | 56 | 0.058 | 0.110 | 0.185 | 0.270 | 0.395 | 0.510 | 0.040 | 0.209 | 0.123 |
| 4-Methyl-1-pentene | 56 | 0.000 | 0.000 | 0.005 | 0.050 | 0.065 | 0.610 | 0.000 | 0.037 | 0.085 |
| 4-Methylheptane | 56 | 0.028 | 0.088 | 0.130 | 0.205 | 0.285 | 0.580 | 0.020 | 0.160 | 0.120 |
| Acetylene | 56 | 0.653 | 0.971 | 1.307 | 1.647 | 2.402 | 4.102 | 0.517 | 1.438 | 0.674 |
| Benzene | 56 | 0.560 | 0.863 | 1.337 | 1.669 | 2.225 | 3.090 | 0.460 | 1.368 | 0.648 |
| Benzylchloride | 56 | 0.021 | 0.030 | 0.060 | 0.060 | 0.070 | 0.140 | 0.000 | 0.050 | 0.023 |
| Bromodichloromethane | 40 | 0.000 | 0.080 | 0.105 | 0.140 | 0.181 | 0.200 | 0.000 | 0.106 | 0.059 |
| Bromoform | 56 | 0.030 | 0.040 | 0.060 | 0.070 | 0.080 | 0.120 | 0.028 | 0.059 | 0.022 |
| Bromomethane | 56 | 0.099 | 0.110 | 0.170 | 0.200 | 0.220 | 4.100 | 0.088 | 0.237 | 0.531 |
| Bromotrichloromethane | 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Butane | 56 | 1.235 | 2.933 | 4.641 | 5.785 | 9.760 | 55.710 | 1.030 | 6.846 | 10.184 |
| Carbontetrachloride | 56 | 0.580 | 0.620 | 0.655 | 0.680 | 0.700 | 0.740 | 0.340 | 0.643 | 0.069 |
| Chlorobenzene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Chloroethane | 56 | 0.074 | 0.090 | 0.120 | 0.140 | 0.185 | 0.290 | 0.070 | 0.126 | 0.048 |
| Chloroform | 56 | 0.080 | 0.103 | 0.145 | 0.193 | 0.234 | 0.330 | 0.080 | 0.156 | 0.063 |
| Chloromethane | 56 | 1.028 | 1.118 | 1.170 | 1.210 | 1.355 | 1.410 | 0.990 | 1.174 | 0.103 |
| cis-1,2-Dichloroethylene | 56 | 0.000 | 0.018 | 0.040 | 0.050 | 0.050 | 0.060 | 0.000 | 0.032 | 0.021 |
| cis-1,2-Dimethylcyclohexa | 51 | 0.000 | 0.040 | 0.060 | 0.090 | 0.140 | 0.270 | 0.000 | 0.070 | 0.054 |

## Table 46 VOC Annual Statistics at Mississauga (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dichloropropene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.100 | 0.000 | 0.004 | 0.015 |
| cis-1,3-Dimethylcyclohexa | 54 | 0.030 | 0.103 | 0.180 | 0.258 | 0.524 | 1.080 | 0.020 | 0.235 | 0.213 |
| cis-1,4/t-1,3-Dimethylcycl | 56 | 0.010 | 0.050 | 0.080 | 0.120 | 0.245 | 0.490 | 0.000 | 0.104 | 0.093 |
| cis-2-Butene | 56 | 0.050 | 0.070 | 0.100 | 0.170 | 0.216 | 6.060 | 0.040 | 0.232 | 0.797 |
| cis-2-Heptene | 56 | 0.000 | 0.000 | 0.040 | 0.060 | 0.075 | 0.140 | 0.000 | 0.036 | 0.036 |
| cis-2-Hexene | 56 | 0.000 | 0.000 | 0.000 | 0.033 | 0.060 | 0.990 | 0.000 | 0.035 | 0.132 |
| cis-2-Pentene | 56 | 0.050 | 0.086 | 0.105 | 0.141 | 0.190 | 5.970 | 0.030 | 0.221 | 0.784 |
| cis-3-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.030 | 0.050 | 0.070 | 1.120 | 0.000 | 0.051 | 0.148 |
| cis-4-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.000 | 0.100 | 0.160 | 1.270 | 0.000 | 0.075 | 0.182 |
| Cyclohexane | 56 | 0.060 | 0.218 | 0.375 | 0.513 | 1.380 | 2.390 | 0.040 | 0.525 | 0.547 |
| Cyclohexene | 56 | 0.000 | 0.000 | 0.000 | 0.050 | 0.070 | 0.160 | 0.000 | 0.029 | 0.038 |
| Cyclopentane | 56 | 0.070 | 0.188 | 0.275 | 0.415 | 0.700 | 1.720 | 0.010 | 0.377 | 0.332 |
| Cyclopentene | 54 | 0.020 | 0.023 | 0.040 | 0.060 | 0.070 | 1.100 | 0.000 | 0.064 | 0.146 |
| Decane | 56 | 0.063 | 0.140 | 0.265 | 0.457 | 0.640 | 1.090 | 0.040 | 0.341 | 0.262 |
| Dibromochloromethane | 53 | 0.006 | 0.030 | 0.060 | 0.070 | 0.080 | 0.120 | 0.000 | 0.052 | 0.029 |
| Dibromomethane | 56 | 0.050 | 0.060 | 0.110 | 0.120 | 0.130 | 0.170 | 0.000 | 0.095 | 0.035 |
| Dichloromethane | 56 | 0.255 | 0.480 | 0.735 | 1.343 | 2.165 | 2.840 | 0.220 | 1.000 | 0.699 |
| Dodecane | 56 | 0.028 | 0.058 | 0.100 | 0.150 | 0.215 | 0.330 | 0.020 | 0.115 | 0.076 |
| EDB | 56 | 0.008 | 0.030 | 0.060 | 0.070 | 0.080 | 0.120 | 0.000 | 0.054 | 0.026 |
| Ethane | 56 | 2.276 | 3.067 | 3.766 | 5.131 | 5.722 | 16.678 | 1.366 | 4.446 | 2.424 |
| Ethylbenzene | 56 | 0.170 | 0.425 | 0.800 | 1.350 | 1.731 | 2.490 | 0.110 | 0.927 | 0.605 |
| Ethylbromide | 56 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.025 | 0.022 |
| Ethylene | 56 | 0.750 | 1.295 | 1.813 | 2.613 | 3.485 | 7.478 | 0.508 | 2.095 | 1.239 |
| Freon11 | 56 | 1.665 | 1.720 | 1.800 | 1.893 | 2.045 | 3.250 | 1.620 | 1.855 | 0.244 |
| Freon113 | 50 | 0.689 | 0.716 | 0.740 | 0.778 | 0.821 | 0.880 | 0.506 | 0.748 | 0.061 |
| Freon114 | 56 | 0.159 | 0.170 | 0.260 | 0.280 | 0.299 | 0.320 | 0.150 | 0.233 | 0.055 |
| Freon12 | 56 | 2.575 | 2.680 | 2.760 | 2.943 | 3.090 | 4.032 | 2.570 | 2.835 | 0.253 |
| Freon22 | 56 | 0.505 | 0.568 | 0.705 | 0.833 | 1.015 | 1.196 | 0.470 | 0.720 | 0.189 |
| Heptane | 56 | 0.158 | 0.425 | 0.725 | 1.163 | 2.250 | 3.250 | 0.100 | 0.969 | 0.803 |
| Hexachlorobutadiene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexane | 56 | 0.335 | 0.820 | 1.241 | 1.883 | 3.795 | 7.060 | 0.190 | 1.751 | 1.496 |
| Hexylbenzene | 52 | 0.000 | 0.000 | 0.000 | 0.033 | 0.050 | 0.090 | 0.000 | 0.018 | 0.025 |
| Indane | 56 | 0.020 | 0.049 | 0.070 | 0.102 | 0.130 | 0.190 | 0.020 | 0.077 | 0.043 |
| Isobutane | 56 | 0.750 | 1.555 | 2.380 | 3.105 | 5.350 | 24.060 | 0.470 | 3.551 | 4.554 |
| iso-Butylbenzene | 56 | 0.010 | 0.020 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.030 | 0.015 |
| Isopentane | 56 | 1.138 | 2.830 | 3.875 | 5.958 | 9.780 | 54.640 | 0.610 | 5.814 | 7.630 |
| Isoprene | 52 | 0.000 | 0.060 | 0.105 | 0.323 | 0.609 | 1.450 | 0.000 | 0.254 | 0.343 |

## Table 46 VOC Annual Statistics at Mississauga (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| iso-Propylbenzene | 56 | 0.020 | 0.040 | 0.060 | 0.080 | 0.105 | 0.160 | 0.020 | 0.066 | 0.034 |
| m and p-Xylene | 56 | 0.405 | 1.253 | 2.465 | 4.318 | 5.870 | 7.860 | 0.220 | 2.967 | 2.095 |
| Methylcyclohexane | 56 | 0.070 | 0.370 | 0.725 | 1.062 | 2.795 | 5.700 | 0.050 | 1.084 | 1.168 |
| Methylcyclopentane | 56 | 0.130 | 0.405 | 0.730 | 1.146 | 2.420 | 3.340 | 0.080 | 0.978 | 0.831 |
| Naphthalene | 30 | 0.065 | 0.100 | 0.153 | 0.225 | 0.372 | 1.011 | 0.040 | 0.207 | 0.184 |
| n-Butylbenzene | 56 | 0.010 | 0.029 | 0.040 | 0.060 | 0.080 | 0.110 | 0.000 | 0.045 | 0.025 |
| Nonane | 56 | 0.058 | 0.166 | 0.240 | 0.435 | 0.540 | 1.760 | 0.040 | 0.341 | 0.322 |
| n-Propylbenzene | 56 | 0.040 | 0.080 | 0.130 | 0.206 | 0.280 | 0.370 | 0.030 | 0.152 | 0.089 |
| Octane | 56 | 0.070 | 0.215 | 0.310 | 0.520 | 0.835 | 1.900 | 0.040 | 0.433 | 0.389 |
| o-Xylene | 56 | 0.140 | 0.375 | 0.749 | 1.285 | 1.835 | 2.400 | 0.090 | 0.879 | 0.606 |
| p-Cymene | 56 | 0.008 | 0.030 | 0.050 | 0.093 | 0.120 | 0.180 | 0.000 | 0.061 | 0.043 |
| Pentane | 56 | 0.818 | 1.800 | 2.570 | 3.743 | 7.360 | 18.930 | 0.410 | 3.583 | 3.420 |
| Propane | 56 | 1.785 | 2.985 | 4.520 | 6.488 | 9.105 | 86.090 | 1.610 | 6.651 | 11.233 |
| Propylene | 56 | 0.220 | 0.418 | 0.590 | 1.025 | 1.318 | 3.600 | 0.150 | 0.782 | 0.604 |
| sec-Butylbenzene | 56 | 0.010 | 0.020 | 0.030 | 0.043 | 0.060 | 0.080 | 0.010 | 0.033 | 0.019 |
| Styrene | 52 | 0.000 | 0.075 | 0.215 | 0.340 | 0.455 | 2.070 | 0.000 | 0.273 | 0.336 |
| tert-Butylbenzene | 56 | 0.000 | 0.000 | 0.000 | 0.030 | 0.035 | 0.050 | 0.000 | 0.013 | 0.016 |
| Tetrachloroethylene | 56 | 0.140 | 0.200 | 0.275 | 0.410 | 0.571 | 0.820 | 0.100 | 0.335 | 0.180 |
| Toluene | 56 | 0.983 | 2.535 | 4.282 | 7.147 | 11.450 | 24.700 | 0.520 | 5.534 | 4.586 |
| trans-1,2-Dichloroethylene | 54 | 0.000 | 0.010 | 0.032 | 0.040 | 0.040 | 0.050 | 0.000 | 0.027 | 0.018 |
| trans-1,2-Dimethylcyclohe: | 56 | 0.000 | 0.078 | 0.120 | 0.178 | 0.360 | 0.830 | 0.000 | 0.164 | 0.157 |
| trans-1,3-Dichloropropene | 56 | 0.000 | 0.000 | 0.000 | 0.030 | 0.030 | 0.090 | 0.000 | 0.012 | 0.018 |
| trans-1,4-Dimethylcyclohe: | 56 | 0.010 | 0.058 | 0.084 | 0.120 | 0.240 | 0.470 | 0.010 | 0.112 | 0.098 |
| trans-2-Butene | 56 | 0.050 | 0.070 | 0.105 | 0.173 | 0.252 | 5.610 | 0.040 | 0.232 | 0.738 |
| trans-2-Heptene | 56 | 0.000 | 0.000 | 0.038 | 0.050 | 0.060 | 0.120 | 0.000 | 0.031 | 0.025 |
| trans-2-Hexene | 56 | 0.000 | 0.020 | 0.040 | 0.050 | 0.070 | 1.170 | 0.000 | 0.056 | 0.153 |
| trans-2-Octene | 21 | 0.000 | 0.000 | 0.000 | 0.070 | 0.090 | 0.260 | 0.000 | 0.040 | 0.062 |
| trans-2-Pentene | 56 | 0.020 | 0.040 | 0.090 | 0.125 | 0.245 | 9.620 | 0.010 | 0.272 | 1.274 |
| trans-3-Heptene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.080 | 0.000 | 0.004 | 0.011 |
| trans-3-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 1.060 | 0.000 | 0.031 | 0.142 |
| trans-4-Methyl-2-pentene | 56 | 0.000 | 0.000 | 0.000 | 0.000 | 0.061 | 0.330 | 0.000 | 0.024 | 0.066 |
| Trichloroethylene | 56 | 0.070 | 0.103 | 0.200 | 0.375 | 0.655 | 1.110 | 0.030 | 0.294 | 0.258 |
| Undecane | 56 | 0.045 | 0.108 | 0.195 | 0.3725 | 0.485 | 0.86 | 0.030 | 0.254 | 0.188 |
| Vinylchloride | 56 | 0.000 | 0.013 | 0.030 | 0.040 | 0.040 | 0.060 | 0.000 | 0.026 | 0.015 |

*Note: VOC sites are operated by Environment Canada.*

## Table 47 VOC Annual Statistics at Ottawa (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 60 | 0.309 | 0.348 | 0.370 | 0.390 | 0.440 | 0.720 | 0.240 | 0.379 | 0.070 |
| 1,1,2,2-Tetrachloroethane | 60 | 0.019 | 0.030 | 0.060 | 0.070 | 0.080 | 0.100 | 0.000 | 0.051 | 0.025 |
| 1,1,2-Trichloroethane | 60 | 0.000 | 0.000 | 0.050 | 0.060 | 0.070 | 0.118 | 0.000 | 0.040 | 0.029 |
| 1,1-Dichloroethane | 60 | 0.000 | 0.000 | 0.040 | 0.050 | 0.050 | 0.060 | 0.000 | 0.030 | 0.022 |
| 1,1-Dichloroethylene | 60 | 0.000 | 0.030 | 0.076 | 0.090 | 0.090 | 0.110 | 0.000 | 0.062 | 0.031 |
| 1,2,3-Trimethylbenzene | 60 | 0.030 | 0.080 | 0.130 | 0.183 | 0.270 | 0.600 | 0.010 | 0.143 | 0.097 |
| 1,2,4-Trimethylbenzene | 59 | 0.080 | 0.288 | 0.497 | 0.730 | 1.036 | 2.170 | 0.020 | 0.539 | 0.377 |
| 1,2-Dichloroethane | 60 | 0.052 | 0.070 | 0.079 | 0.080 | 0.090 | 0.125 | 0.050 | 0.075 | 0.014 |
| 1,2-Dichloropropane | 57 | 0.000 | 0.000 | 0.000 | 0.050 | 0.054 | 0.070 | 0.000 | 0.021 | 0.025 |
| 1,2-Diethylbenzene | 60 | 0.000 | 0.020 | 0.020 | 0.030 | 0.041 | 0.050 | 0.000 | 0.025 | 0.013 |
| 1,3,5-Trimethylbenzene | 60 | 0.030 | 0.098 | 0.160 | 0.233 | 0.322 | 0.660 | 0.010 | 0.175 | 0.116 |
| 1,3-Butadiene | 60 | 0.070 | 0.108 | 0.159 | 0.226 | 0.291 | 0.720 | 0.060 | 0.179 | 0.108 |
| 1,3-Dichlorobenzene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 60 | 0.020 | 0.030 | 0.046 | 0.056 | 0.074 | 0.140 | 0.010 | 0.047 | 0.024 |
| 1,4-Dichlorobutane | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.031 | 0.060 | 0.000 | 0.009 | 0.016 |
| 1,4-Diethylbenzene | 60 | 0.030 | 0.070 | 0.106 | 0.140 | 0.221 | 0.370 | 0.020 | 0.116 | 0.069 |
| 1-Butene/Isobutene | 60 | 0.299 | 0.400 | 0.610 | 0.833 | 1.243 | 2.760 | 0.270 | 0.723 | 0.456 |
| 1-Butyne | 60 | 0.000 | 0.000 | 0.000 | 0.033 | 0.040 | 0.050 | 0.000 | 0.015 | 0.019 |
| 1-Decene | 37 | 0.000 | 0.000 | 0.000 | 0.000 | 0.034 | 0.060 | 0.000 | 0.006 | 0.017 |
| 1-Heptene | 40 | 0.049 | 0.088 | 0.110 | 0.170 | 0.201 | 0.290 | 0.000 | 0.124 | 0.060 |
| 1-Hexene | 60 | 0.110 | 0.182 | 0.220 | 0.290 | 0.345 | 0.740 | 0.100 | 0.251 | 0.125 |
| 1-Methylcyclohexene | 60 | 0.020 | 0.050 | 0.060 | 0.070 | 0.081 | 0.102 | 0.000 | 0.057 | 0.022 |
| 1-Methylcyclopentene | 60 | 0.030 | 0.050 | 0.070 | 0.100 | 0.141 | 0.220 | 0.000 | 0.079 | 0.043 |
| 1-Nonene | 40 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.080 | 0.000 | 0.009 | 0.019 |
| 1-Octene | 40 | 0.000 | 0.000 | 0.040 | 0.050 | 0.051 | 0.073 | 0.000 | 0.032 | 0.023 |
| 1-Pentene | 60 | 0.090 | 0.130 | 0.180 | 0.253 | 0.340 | 0.510 | 0.070 | 0.204 | 0.098 |
| 1-Propyne | 57 | 0.050 | 0.070 | 0.100 | 0.130 | 0.154 | 0.370 | 0.000 | 0.104 | 0.054 |
| 2,2,3-Trimethylbutane | 60 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.054 | 0.000 | 0.007 | 0.013 |
| 2,2,4-Trimethylpentane | 60 | 0.110 | 0.210 | 0.351 | 0.463 | 0.705 | 1.050 | 0.090 | 0.381 | 0.229 |
| 2,2,5-Trimethylhexane | 60 | 0.010 | 0.020 | 0.030 | 0.047 | 0.070 | 0.130 | 0.010 | 0.040 | 0.027 |
| 2,2-Dimethylbutane | 60 | 0.109 | 0.160 | 0.225 | 0.323 | 0.437 | 0.730 | 0.080 | 0.263 | 0.146 |
| 2,2-Dimethylhexane | 60 | 0.020 | 0.020 | 0.030 | 0.031 | 0.040 | 0.060 | 0.010 | 0.029 | 0.011 |
| 2,2-Dimethylpentane | 60 | 0.000 | 0.030 | 0.050 | 0.060 | 0.081 | 0.120 | 0.000 | 0.049 | 0.027 |
| 2,2-Dimethylpropane | 60 | 0.030 | 0.040 | 0.050 | 0.060 | 0.070 | 0.120 | 0.020 | 0.052 | 0.019 |
| 2,3,4-Trimethylpentane | 60 | 0.040 | 0.090 | 0.150 | 0.183 | 0.245 | 0.430 | 0.030 | 0.151 | 0.085 |
| 2,3-Dimethylbutane | 60 | 0.100 | 0.180 | 0.311 | 0.403 | 0.523 | 0.850 | 0.070 | 0.321 | 0.170 |
| 2,3-Dimethylpentane | 60 | 0.090 | 0.130 | 0.205 | 0.260 | 0.340 | 0.530 | 0.060 | 0.214 | 0.099 |

## Table 47 VOC Annual Statistics at Ottawa (1999)

**Unit =micrograms/$m^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,4-Dimethylhexane | 60 | 0.040 | 0.070 | 0.100 | 0.130 | 0.170 | 0.280 | 0.030 | 0.106 | 0.053 |
| 2,4-Dimethylpentane | 60 | 0.040 | 0.080 | 0.120 | 0.160 | 0.230 | 0.320 | 0.000 | 0.129 | 0.069 |
| 2,5-Dimethylhexane | 60 | 0.030 | 0.050 | 0.080 | 0.102 | 0.141 | 0.230 | 0.020 | 0.082 | 0.042 |
| 2-Ethyl-1-Butene | 60 | 0.000 | 0.020 | 0.024 | 0.040 | 0.070 | 0.110 | 0.000 | 0.031 | 0.026 |
| 2-Ethyltoluene | 60 | 0.040 | 0.090 | 0.145 | 0.200 | 0.264 | 0.540 | 0.030 | 0.152 | 0.088 |
| 2-Methyl-1-butene | 60 | 0.000 | 0.148 | 0.225 | 0.353 | 0.473 | 0.920 | 0.000 | 0.267 | 0.187 |
| 2-Methyl-2-butene | 59 | 0.109 | 0.215 | 0.360 | 0.485 | 0.662 | 1.300 | 0.090 | 0.384 | 0.245 |
| 2-Methylheptane | 60 | 0.060 | 0.118 | 0.170 | 0.240 | 0.290 | 0.510 | 0.040 | 0.179 | 0.090 |
| 2-Methylhexane | 60 | 0.140 | 0.238 | 0.390 | 0.553 | 0.632 | 1.170 | 0.110 | 0.417 | 0.204 |
| 2-Methylpentane | 60 | 0.359 | 0.643 | 1.155 | 1.577 | 1.854 | 4.370 | 0.310 | 1.191 | 0.694 |
| 3,6-Dimethyloctane | 60 | 0.000 | 0.000 | 0.029 | 0.040 | 0.053 | 0.080 | 0.000 | 0.025 | 0.023 |
| 3-Ethyltoluene | 60 | 0.070 | 0.180 | 0.315 | 0.470 | 0.623 | 1.320 | 0.040 | 0.348 | 0.223 |
| 3-Methyl-1-pentene | 60 | 0.000 | 0.000 | 0.040 | 0.070 | 0.090 | 0.110 | 0.000 | 0.036 | 0.037 |
| 3-Methylheptane | 60 | 0.050 | 0.090 | 0.160 | 0.221 | 0.270 | 0.510 | 0.030 | 0.165 | 0.088 |
| 3-Methylhexane | 60 | 0.150 | 0.278 | 0.440 | 0.640 | 0.701 | 1.320 | 0.130 | 0.457 | 0.226 |
| 3-Methylpentane | 60 | 0.268 | 0.438 | 0.735 | 0.983 | 1.151 | 3.020 | 0.210 | 0.769 | 0.446 |
| 4-Ethyltoluene | 60 | 0.050 | 0.116 | 0.169 | 0.243 | 0.330 | 0.660 | 0.030 | 0.191 | 0.111 |
| 4-Methyl-1-pentene | 60 | 0.000 | 0.000 | 0.035 | 0.063 | 0.080 | 0.130 | 0.000 | 0.034 | 0.035 |
| 4-Methylheptane | 60 | 0.000 | 0.038 | 0.070 | 0.091 | 0.120 | 0.220 | 0.000 | 0.070 | 0.042 |
| Acetylene | 60 | 0.621 | 1.048 | 1.553 | 2.493 | 3.101 | 8.176 | 0.488 | 1.899 | 1.202 |
| Benzene | 60 | 0.460 | 0.725 | 1.035 | 1.660 | 2.013 | 3.320 | 0.376 | 1.225 | 0.660 |
| Benzylchloride | 60 | 0.020 | 0.030 | 0.050 | 0.060 | 0.060 | 0.070 | 0.020 | 0.045 | 0.014 |
| Bromodichloromethane | 40 | 0.060 | 0.080 | 0.090 | 0.110 | 0.120 | 0.180 | 0.050 | 0.097 | 0.028 |
| Bromoform | 60 | 0.030 | 0.033 | 0.057 | 0.070 | 0.080 | 0.090 | 0.030 | 0.054 | 0.019 |
| Bromomethane | 60 | 0.090 | 0.110 | 0.170 | 0.190 | 0.201 | 0.230 | 0.086 | 0.154 | 0.044 |
| Bromotrichloromethane | 9 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Butane | 60 | 0.778 | 1.618 | 2.995 | 5.160 | 8.449 | 14.720 | 0.700 | 3.848 | 3.315 |
| Carbontetrachloride | 60 | 0.518 | 0.610 | 0.660 | 0.710 | 0.711 | 0.730 | 0.293 | 0.638 | 0.089 |
| Chlorobenzene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.041 | 0.060 | 0.000 | 0.007 | 0.017 |
| Chloroethane | 60 | 0.040 | 0.058 | 0.090 | 0.110 | 0.120 | 0.131 | 0.036 | 0.086 | 0.028 |
| Chloroform | 60 | 0.090 | 0.120 | 0.140 | 0.183 | 0.240 | 0.330 | 0.080 | 0.159 | 0.055 |
| Chloromethane | 60 | 1.026 | 1.090 | 1.140 | 1.193 | 1.254 | 1.560 | 0.810 | 1.155 | 0.119 |
| cis-1,2-Dichloroethylene | 60 | 0.000 | 0.020 | 0.040 | 0.050 | 0.051 | 0.060 | 0.000 | 0.034 | 0.020 |
| cis-1,2-Dimethylcyclohexa | 57 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.080 | 0.000 | 0.036 | 0.018 |
| cis-1,3-Dichloropropene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 | 0.001 | 0.002 |
| cis-1,3-Dimethylcyclohexa | 59 | 0.020 | 0.040 | 0.050 | 0.070 | 0.100 | 0.180 | 0.010 | 0.057 | 0.030 |
| cis-1,4/t-1,3-Dimethylcycl | 60 | 0.000 | 0.020 | 0.025 | 0.033 | 0.050 | 0.090 | 0.000 | 0.027 | 0.016 |

## Table 47 VOC Annual Statistics at Ottawa (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-2-Butene | 60 | 0.080 | 0.130 | 0.195 | 0.270 | 0.360 | 0.830 | 0.050 | 0.235 | 0.166 |
| cis-2-Heptene | 57 | 0.000 | 0.030 | 0.050 | 0.060 | 0.084 | 0.120 | 0.000 | 0.043 | 0.031 |
| cis-2-Hexene | 60 | 0.000 | 0.000 | 0.033 | 0.060 | 0.100 | 0.140 | 0.000 | 0.039 | 0.039 |
| cis-2-Pentene | 58 | 0.090 | 0.140 | 0.175 | 0.235 | 0.316 | 0.530 | 0.070 | 0.202 | 0.097 |
| cis-3-Methyl-2-pentene | 60 | 0.000 | 0.030 | 0.050 | 0.070 | 0.120 | 0.160 | 0.000 | 0.057 | 0.037 |
| cis-4-Methyl-2-pentene | 60 | 0.000 | 0.000 | 0.000 | 0.093 | 0.141 | 0.170 | 0.000 | 0.046 | 0.060 |
| Cyclohexane | 60 | 0.040 | 0.078 | 0.130 | 0.183 | 0.280 | 0.430 | 0.000 | 0.145 | 0.087 |
| Cyclohexene | 60 | 0.000 | 0.000 | 0.010 | 0.060 | 0.070 | 0.203 | 0.000 | 0.030 | 0.038 |
| Cyclopentane | 60 | 0.070 | 0.128 | 0.210 | 0.296 | 0.350 | 0.620 | 0.060 | 0.221 | 0.121 |
| Cyclopentene | 60 | 0.020 | 0.050 | 0.070 | 0.090 | 0.111 | 0.210 | 0.020 | 0.073 | 0.039 |
| Decane | 60 | 0.030 | 0.158 | 0.230 | 0.315 | 0.430 | 1.020 | 0.030 | 0.253 | 0.181 |
| Dibromochloromethane | 54 | 0.013 | 0.023 | 0.060 | 0.080 | 0.087 | 0.116 | 0.000 | 0.056 | 0.030 |
| Dibromomethane | 60 | 0.050 | 0.060 | 0.100 | 0.120 | 0.141 | 0.160 | 0.040 | 0.098 | 0.035 |
| Dichloromethane | 58 | 0.237 | 0.343 | 0.444 | 0.525 | 0.736 | 3.370 | 0.170 | 0.532 | 0.477 |
| Dodecane | 60 | 0.020 | 0.050 | 0.070 | 0.091 | 0.140 | 0.430 | 0.010 | 0.082 | 0.063 |
| EDB | 57 | 0.000 | 0.030 | 0.060 | 0.080 | 0.080 | 0.127 | 0.000 | 0.054 | 0.029 |
| Ethane | 60 | 1.485 | 2.207 | 2.766 | 3.725 | 4.519 | 5.542 | 1.135 | 2.978 | 1.103 |
| Ethylbenzene | 60 | 0.160 | 0.298 | 0.550 | 0.737 | 0.941 | 1.850 | 0.120 | 0.562 | 0.314 |
| Ethylbromide | 60 | 0.000 | 0.000 | 0.038 | 0.050 | 0.050 | 0.070 | 0.000 | 0.027 | 0.024 |
| Ethylene | 60 | 1.054 | 1.415 | 2.228 | 3.524 | 4.503 | 8.328 | 0.662 | 2.605 | 1.607 |
| Freon11 | 60 | 1.587 | 1.690 | 1.775 | 1.840 | 1.974 | 2.340 | 1.250 | 1.786 | 0.183 |
| Freon113 | 59 | 0.509 | 0.700 | 0.740 | 0.760 | 0.803 | 0.923 | 0.380 | 0.722 | 0.100 |
| Freon114 | 60 | 0.148 | 0.170 | 0.270 | 0.280 | 0.300 | 0.330 | 0.140 | 0.237 | 0.059 |
| Freon12 | 60 | 2.539 | 2.678 | 2.820 | 3.015 | 3.214 | 3.926 | 2.230 | 2.895 | 0.334 |
| Freon22 | 60 | 0.509 | 0.588 | 0.695 | 0.838 | 0.950 | 1.260 | 0.470 | 0.731 | 0.188 |
| Heptane | 60 | 0.140 | 0.230 | 0.360 | 0.443 | 0.583 | 1.030 | 0.000 | 0.362 | 0.180 |
| Hexane | 60 | 0.260 | 0.459 | 0.740 | 0.925 | 1.071 | 2.030 | 0.230 | 0.726 | 0.322 |
| Hexylbenzene | 57 | 0.000 | 0.000 | 0.000 | 0.030 | 0.050 | 0.070 | 0.000 | 0.017 | 0.022 |
| Indane | 60 | 0.020 | 0.058 | 0.080 | 0.110 | 0.142 | 0.330 | 0.010 | 0.087 | 0.054 |
| Isobutane | 60 | 0.470 | 0.875 | 1.580 | 2.720 | 4.674 | 9.690 | 0.430 | 2.212 | 2.061 |
| iso-Butylbenzene | 60 | 0.010 | 0.020 | 0.030 | 0.030 | 0.040 | 0.060 | 0.010 | 0.028 | 0.011 |
| Isopentane | 60 | 0.959 | 1.715 | 3.205 | 4.755 | 5.866 | 9.950 | 0.860 | 3.476 | 2.036 |
| Isoprene | 54 | 0.057 | 0.133 | 0.227 | 0.490 | 1.202 | 2.270 | 0.050 | 0.442 | 0.478 |
| iso-Propylbenzene | 60 | 0.020 | 0.040 | 0.060 | 0.070 | 0.081 | 0.150 | 0.020 | 0.057 | 0.023 |
| m and p-Xylene | 60 | 0.400 | 0.765 | 1.540 | 2.220 | 2.751 | 5.570 | 0.330 | 1.586 | 0.944 |
| Methylcyclohexane | 60 | 0.050 | 0.108 | 0.165 | 0.243 | 0.345 | 0.550 | 0.040 | 0.190 | 0.109 |
| Methylcyclopentane | 60 | 0.139 | 0.250 | 0.400 | 0.553 | 0.735 | 1.220 | 0.110 | 0.433 | 0.234 |

## Table 47 VOC Annual Statistics at Ottawa (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| Naphthalene | 32 | 0.036 | 0.078 | 0.175 | 0.430 | 0.703 | 0.959 | 0.030 | 0.289 | 0.279 |
| n-Butylbenzene | 60 | 0.010 | 0.030 | 0.040 | 0.050 | 0.062 | 0.130 | 0.000 | 0.040 | 0.023 |
| Nonane | 60 | 0.040 | 0.128 | 0.165 | 0.210 | 0.281 | 0.630 | 0.020 | 0.176 | 0.104 |
| n-Propylbenzene | 60 | 0.040 | 0.080 | 0.130 | 0.163 | 0.215 | 0.430 | 0.030 | 0.131 | 0.069 |
| Octane | 60 | 0.050 | 0.098 | 0.160 | 0.193 | 0.283 | 0.470 | 0.030 | 0.163 | 0.086 |
| o-Xylene | 60 | 0.150 | 0.268 | 0.530 | 0.757 | 0.973 | 1.890 | 0.130 | 0.551 | 0.326 |
| p-Cymene | 60 | 0.000 | 0.020 | 0.040 | 0.061 | 0.090 | 0.360 | 0.000 | 0.049 | 0.051 |
| Pentane | 60 | 0.499 | 0.928 | 1.410 | 2.045 | 2.448 | 3.850 | 0.420 | 1.524 | 0.777 |
| Propane | 60 | 0.896 | 1.888 | 2.630 | 3.830 | 5.578 | 8.780 | 0.780 | 2.999 | 1.653 |
| Propylene | 60 | 0.329 | 0.448 | 0.700 | 0.993 | 1.310 | 3.240 | 0.290 | 0.799 | 0.486 |
| sec-Butylbenzene | 60 | 0.010 | 0.020 | 0.030 | 0.030 | 0.041 | 0.070 | 0.010 | 0.029 | 0.012 |
| Styrene | 54 | 0.020 | 0.074 | 0.110 | 0.160 | 0.230 | 0.470 | 0.000 | 0.125 | 0.085 |
| tert-Butylbenzene | 59 | 0.000 | 0.000 | 0.000 | 0.030 | 0.032 | 0.040 | 0.000 | 0.011 | 0.015 |
| Tetrachloroethylene | 60 | 0.080 | 0.203 | 0.381 | 0.683 | 1.156 | 3.900 | 0.070 | 0.582 | 0.639 |
| Toluene | 60 | 0.729 | 1.453 | 2.830 | 3.803 | 5.669 | 8.960 | 0.430 | 2.936 | 1.809 |
| trans-1,2-Dichloroethylene | 60 | 0.000 | 0.000 | 0.040 | 0.050 | 0.050 | 0.070 | 0.000 | 0.029 | 0.021 |
| trans-1,2-Dimethylcyclohe: | 60 | 0.000 | 0.020 | 0.035 | 0.050 | 0.070 | 0.130 | 0.000 | 0.035 | 0.028 |
| trans-1,3-Dichloropropene | 57 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.000 | 0.009 | 0.013 |
| trans-1,4-Dimethylcyclohe: | 60 | 0.010 | 0.020 | 0.030 | 0.036 | 0.050 | 0.090 | 0.000 | 0.027 | 0.017 |
| trans-2-Butene | 60 | 0.080 | 0.130 | 0.200 | 0.283 | 0.417 | 0.990 | 0.060 | 0.251 | 0.200 |
| trans-2-Heptene | 60 | 0.000 | 0.000 | 0.030 | 0.050 | 0.061 | 0.430 | 0.000 | 0.036 | 0.057 |
| trans-2-Hexene | 60 | 0.010 | 0.040 | 0.050 | 0.071 | 0.102 | 0.170 | 0.010 | 0.059 | 0.036 |
| trans-2-Octene | 20 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.040 | 0.000 | 0.013 | 0.017 |
| trans-2-Pentene | 60 | 0.030 | 0.094 | 0.155 | 0.303 | 0.402 | 0.780 | 0.020 | 0.212 | 0.165 |
| trans-3-Heptene | 60 | 0.000 | 0.000 | 0.000 | 0.010 | 0.020 | 0.020 | 0.000 | 0.006 | 0.008 |
| trans-3-Methyl-2-pentene | 60 | 0.000 | 0.000 | 0.030 | 0.063 | 0.081 | 0.150 | 0.000 | 0.036 | 0.039 |
| trans-4-Methyl-2-pentene | 57 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.090 | 0.000 | 0.009 | 0.019 |
| Trichloroethylene | 60 | 0.040 | 0.070 | 0.090 | 0.120 | 0.151 | 1.110 | 0.020 | 0.117 | 0.141 |
| Undecane | 60 | 0.030 | 0.098 | 0.170 | 0.240 | 0.332 | 0.930 | 0.020 | 0.198 | 0.167 |
| Vinylchloride | 60 | 0.000 | 0.010 | 0.030 | 0.030 | 0.040 | 0.040 | 0.000 | 0.023 | 0.012 |

*Note: VOC sites are operated by Environment Canada.*

## Table 48 VOC Annual Statistics at Point Petre (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 58 | 0.380 | 0.453 | 0.530 | 0.578 | 0.736 | 1.510 | 0.350 | 0.558 | 0.186 |
| 1,1,2,2-Tetrachloroethane | 58 | 0.015 | 0.023 | 0.050 | 0.060 | 0.070 | 0.140 | 0.000 | 0.046 | 0.024 |
| 1,1,2-Trichloroethane | 58 | 0.000 | 0.020 | 0.040 | 0.050 | 0.060 | 0.128 | 0.000 | 0.036 | 0.025 |
| 1,1-Dichloroethane | 58 | 0.000 | 0.000 | 0.037 | 0.040 | 0.050 | 0.050 | 0.000 | 0.028 | 0.019 |
| 1,1-Dichloroethylene | 58 | 0.000 | 0.030 | 0.065 | 0.080 | 0.090 | 0.100 | 0.000 | 0.057 | 0.029 |
| 1,2,3-Trimethylbenzene | 58 | 0.012 | 0.030 | 0.030 | 0.048 | 0.060 | 0.090 | 0.010 | 0.037 | 0.016 |
| 1,2,4-Trichlorobenzene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 58 | 0.039 | 0.070 | 0.090 | 0.122 | 0.179 | 0.310 | 0.030 | 0.100 | 0.055 |
| 1,2-Dichlorobenzene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 58 | 0.050 | 0.060 | 0.070 | 0.080 | 0.083 | 0.104 | 0.040 | 0.069 | 0.014 |
| 1,2-Dichloropropane | 58 | 0.000 | 0.000 | 0.000 | 0.040 | 0.050 | 0.080 | 0.000 | 0.020 | 0.024 |
| 1,2-Diethylbenzene | 58 | 0.000 | 0.010 | 0.020 | 0.020 | 0.030 | 0.040 | 0.000 | 0.018 | 0.010 |
| 1,3,5-Trimethylbenzene | 58 | 0.010 | 0.024 | 0.030 | 0.040 | 0.053 | 0.100 | 0.010 | 0.035 | 0.017 |
| 1,3-Butadiene | 58 | 0.009 | 0.030 | 0.040 | 0.040 | 0.050 | 0.130 | 0.000 | 0.036 | 0.020 |
| 1,3-Dichlorobenzene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 58 | 0.000 | 0.010 | 0.020 | 0.027 | 0.030 | 0.040 | 0.000 | 0.019 | 0.010 |
| 1,4-Dichlorobenzene | 58 | 0.020 | 0.030 | 0.040 | 0.050 | 0.060 | 0.080 | 0.020 | 0.042 | 0.015 |
| 1,4-Dichlorobutane | 58 | 0.000 | 0.000 | 0.000 | 0.030 | 0.033 | 0.050 | 0.000 | 0.011 | 0.016 |
| 1,4-Diethylbenzene | 56 | 0.020 | 0.030 | 0.045 | 0.053 | 0.070 | 0.090 | 0.020 | 0.046 | 0.018 |
| 1-Butene/Isobutene | 58 | 0.110 | 0.163 | 0.200 | 0.220 | 0.253 | 1.270 | 0.080 | 0.213 | 0.150 |
| 1-Butyne | 58 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.030 | 0.000 | 0.010 | 0.013 |
| 1-Decene | 39 | 0.000 | 0.000 | 0.000 | 0.040 | 0.040 | 0.560 | 0.000 | 0.031 | 0.089 |
| 1-Heptene | 39 | 0.000 | 0.040 | 0.050 | 0.060 | 0.070 | 0.590 | 0.000 | 0.058 | 0.090 |
| 1-Hexene | 58 | 0.000 | 0.110 | 0.131 | 0.158 | 0.170 | 0.920 | 0.000 | 0.128 | 0.119 |
| 1-Methylcyclohexene | 58 | 0.000 | 0.030 | 0.040 | 0.050 | 0.063 | 0.110 | 0.000 | 0.039 | 0.022 |
| 1-Methylcyclopentene | 58 | 0.000 | 0.020 | 0.030 | 0.040 | 0.040 | 0.070 | 0.000 | 0.029 | 0.015 |
| 1-Nonene | 39 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.580 | 0.000 | 0.031 | 0.095 |
| 1-Octene | 39 | 0.000 | 0.010 | 0.030 | 0.040 | 0.040 | 0.480 | 0.000 | 0.038 | 0.075 |
| 1-Pentene | 58 | 0.034 | 0.050 | 0.070 | 0.078 | 0.090 | 0.600 | 0.000 | 0.071 | 0.074 |
| 1-Propyne | 53 | 0.000 | 0.010 | 0.020 | 0.030 | 0.050 | 0.070 | 0.000 | 0.024 | 0.019 |
| 2,2,3-Trimethylbutane | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 | 0.001 | 0.003 |
| 2,2,4-Trimethylpentane | 58 | 0.049 | 0.080 | 0.143 | 0.190 | 0.234 | 0.360 | 0.030 | 0.144 | 0.076 |
| 2,2,5-Trimethylhexane | 58 | 0.000 | 0.010 | 0.013 | 0.020 | 0.030 | 0.030 | 0.000 | 0.015 | 0.009 |
| 2,2-Dimethylbutane | 58 | 0.049 | 0.071 | 0.100 | 0.120 | 0.133 | 0.160 | 0.030 | 0.096 | 0.033 |
| 2,2-Dimethylhexane | 58 | 0.000 | 0.010 | 0.020 | 0.020 | 0.030 | 0.037 | 0.000 | 0.016 | 0.010 |
| 2,2-Dimethylpentane | 58 | 0.000 | 0.000 | 0.020 | 0.030 | 0.030 | 0.040 | 0.000 | 0.016 | 0.014 |
| 2,2-Dimethylpropane | 58 | 0.020 | 0.030 | 0.040 | 0.050 | 0.060 | 0.060 | 0.000 | 0.040 | 0.015 |

## Table 48 VOC Annual Statistics at Point Petre (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 58 | 0.000 | 0.023 | 0.040 | 0.061 | 0.071 | 0.100 | 0.000 | 0.044 | 0.025 |
| 2,3-Dimethylbutane | 58 | 0.000 | 0.054 | 0.080 | 0.100 | 0.140 | 0.150 | 0.000 | 0.079 | 0.040 |
| 2,3-Dimethylpentane | 58 | 0.000 | 0.050 | 0.070 | 0.098 | 0.103 | 0.140 | 0.000 | 0.071 | 0.033 |
| 2,4-Dimethylhexane | 58 | 0.000 | 0.020 | 0.040 | 0.050 | 0.060 | 0.080 | 0.000 | 0.037 | 0.019 |
| 2,4-Dimethylpentane | 58 | 0.000 | 0.020 | 0.040 | 0.052 | 0.070 | 0.080 | 0.000 | 0.036 | 0.025 |
| 2,5-Dimethylhexane | 58 | 0.000 | 0.020 | 0.020 | 0.030 | 0.050 | 0.064 | 0.000 | 0.027 | 0.015 |
| 2-Ethyl-1-Butene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.000 | 0.001 | 0.006 |
| 2-Ethyltoluene | 58 | 0.020 | 0.030 | 0.040 | 0.050 | 0.060 | 0.080 | 0.010 | 0.039 | 0.015 |
| 2-Methyl-1-butene | 58 | 0.000 | 0.000 | 0.040 | 0.060 | 0.070 | 0.280 | 0.000 | 0.034 | 0.044 |
| 2-Methyl-2-butene | 57 | 0.030 | 0.040 | 0.050 | 0.050 | 0.060 | 0.220 | 0.020 | 0.049 | 0.025 |
| 2-Methylheptane | 58 | 0.030 | 0.040 | 0.050 | 0.069 | 0.089 | 0.092 | 0.000 | 0.053 | 0.022 |
| 2-Methylhexane | 58 | 0.000 | 0.060 | 0.085 | 0.130 | 0.147 | 0.210 | 0.000 | 0.091 | 0.047 |
| 2-Methylpentane | 58 | 0.107 | 0.193 | 0.290 | 0.395 | 0.490 | 0.760 | 0.030 | 0.300 | 0.156 |
| 3,6-Dimethyloctane | 58 | 0.000 | 0.000 | 0.000 | 0.020 | 0.023 | 0.080 | 0.000 | 0.010 | 0.016 |
| 3-Ethyltoluene | 58 | 0.020 | 0.040 | 0.060 | 0.076 | 0.113 | 0.170 | 0.020 | 0.063 | 0.033 |
| 3-Methyl-1-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.120 | 0.000 | 0.013 | 0.022 |
| 3-Methylheptane | 58 | 0.000 | 0.030 | 0.040 | 0.058 | 0.067 | 0.100 | 0.000 | 0.041 | 0.022 |
| 3-Methylhexane | 58 | 0.000 | 0.050 | 0.100 | 0.150 | 0.169 | 0.240 | 0.000 | 0.099 | 0.061 |
| 3-Methylpentane | 58 | 0.120 | 0.180 | 0.225 | 0.289 | 0.320 | 0.380 | 0.070 | 0.232 | 0.071 |
| 4-Ethyltoluene | 58 | 0.020 | 0.040 | 0.055 | 0.070 | 0.090 | 0.120 | 0.020 | 0.057 | 0.024 |
| 4-Methyl-1-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.190 | 0.000 | 0.016 | 0.030 |
| 4-Methylheptane | 58 | 0.000 | 0.000 | 0.010 | 0.020 | 0.030 | 0.730 | 0.000 | 0.024 | 0.095 |
| Acetylene | 58 | 0.324 | 0.520 | 0.720 | 1.048 | 1.221 | 1.568 | 0.181 | 0.766 | 0.332 |
| Benzene | 58 | 0.169 | 0.320 | 0.435 | 0.579 | 0.719 | 1.040 | 0.120 | 0.463 | 0.201 |
| Benzylchloride | 58 | 0.020 | 0.030 | 0.050 | 0.050 | 0.060 | 0.060 | 0.020 | 0.043 | 0.013 |
| Bromodichloromethane | 43 | 0.000 | 0.050 | 0.070 | 0.080 | 0.090 | 0.120 | 0.000 | 0.062 | 0.030 |
| Bromoform | 58 | 0.030 | 0.031 | 0.060 | 0.060 | 0.070 | 0.090 | 0.020 | 0.051 | 0.017 |
| Bromomethane | 58 | 0.090 | 0.110 | 0.161 | 0.188 | 0.200 | 0.230 | 0.084 | 0.154 | 0.042 |
| Bromotrichloromethane | 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Butane | 58 | 0.294 | 0.540 | 0.905 | 1.670 | 2.178 | 2.760 | 0.170 | 1.118 | 0.710 |
| Carbontetrachloride | 58 | 0.510 | 0.620 | 0.660 | 0.696 | 0.720 | 0.770 | 0.308 | 0.642 | 0.084 |
| Chlorobenzene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Chloroethane | 58 | 0.040 | 0.053 | 0.070 | 0.090 | 0.100 | 0.250 | 0.000 | 0.072 | 0.032 |
| Chloroform | 58 | 0.080 | 0.090 | 0.110 | 0.120 | 0.140 | 0.204 | 0.070 | 0.111 | 0.026 |
| Chloromethane | 58 | 0.990 | 1.093 | 1.150 | 1.208 | 1.310 | 1.510 | 0.930 | 1.159 | 0.114 |
| cis-1,2-Dichloroethylene | 58 | 0.000 | 0.000 | 0.040 | 0.040 | 0.050 | 0.072 | 0.000 | 0.030 | 0.022 |
| cis-1,2-Dimethylcyclohexa | 53 | 0.000 | 0.030 | 0.030 | 0.040 | 0.040 | 0.050 | 0.000 | 0.027 | 0.014 |

## Table 48 VOC Annual Statistics at Point Petre (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dichloropropene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.003 | 0.020 | 0.000 | 0.001 | 0.004 |
| cis-1,3-Dimethylcyclohexa | 56 | 0.000 | 0.010 | 0.020 | 0.030 | 0.035 | 0.050 | 0.000 | 0.021 | 0.011 |
| cis-1,4/t-1,3-Dimethylcycl | 58 | 0.000 | 0.000 | 0.010 | 0.010 | 0.020 | 0.020 | 0.000 | 0.008 | 0.007 |
| cis-2-Butene | 58 | 0.000 | 0.020 | 0.030 | 0.040 | 0.040 | 0.090 | 0.000 | 0.031 | 0.016 |
| cis-2-Heptene | 58 | 0.000 | 0.000 | 0.030 | 0.040 | 0.040 | 0.084 | 0.000 | 0.022 | 0.020 |
| cis-2-Hexene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.000 | 0.001 | 0.004 |
| cis-2-Pentene | 58 | 0.000 | 0.040 | 0.051 | 0.060 | 0.070 | 0.090 | 0.000 | 0.047 | 0.022 |
| cis-3-Methyl-2-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.020 | 0.023 | 0.030 | 0.000 | 0.007 | 0.011 |
| cis-4-Methyl-2-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.060 | 0.000 | 0.004 | 0.013 |
| Cyclohexane | 58 | 0.000 | 0.040 | 0.075 | 0.100 | 0.126 | 0.198 | 0.000 | 0.074 | 0.044 |
| Cyclohexene | 58 | 0.000 | 0.000 | 0.000 | 0.038 | 0.040 | 0.170 | 0.000 | 0.017 | 0.028 |
| Cyclopentane | 58 | 0.000 | 0.040 | 0.060 | 0.072 | 0.090 | 0.130 | 0.000 | 0.058 | 0.028 |
| Cyclopentene | 58 | 0.000 | 0.011 | 0.030 | 0.040 | 0.040 | 0.100 | 0.000 | 0.029 | 0.017 |
| Decane | 57 | 0.020 | 0.040 | 0.060 | 0.090 | 0.120 | 0.280 | 0.000 | 0.072 | 0.054 |
| Dibromochloromethane | 50 | 0.005 | 0.020 | 0.050 | 0.060 | 0.070 | 0.147 | 0.000 | 0.047 | 0.028 |
| Dibromomethane | 58 | 0.050 | 0.060 | 0.100 | 0.120 | 0.130 | 0.160 | 0.050 | 0.098 | 0.033 |
| Dodecane | 58 | 0.029 | 0.040 | 0.050 | 0.070 | 0.080 | 0.250 | 0.020 | 0.057 | 0.034 |
| EDB | 58 | 0.000 | 0.020 | 0.055 | 0.060 | 0.073 | 0.122 | 0.000 | 0.047 | 0.027 |
| Ethane | 58 | 1.054 | 1.834 | 2.479 | 3.074 | 4.021 | 5.433 | 0.924 | 2.597 | 1.072 |
| Ethylbenzene | 58 | 0.060 | 0.120 | 0.170 | 0.208 | 0.250 | 0.770 | 0.050 | 0.169 | 0.099 |
| Ethylbromide | 58 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.024 | 0.021 |
| Ethylene | 58 | 0.278 | 0.399 | 0.573 | 0.854 | 1.296 | 6.378 | 0.218 | 0.811 | 0.891 |
| Freon11 | 58 | 1.729 | 1.849 | 1.975 | 2.145 | 2.312 | 2.760 | 1.720 | 2.016 | 0.231 |
| Freon113 | 52 | 0.597 | 0.670 | 0.690 | 0.720 | 0.740 | 0.780 | 0.400 | 0.680 | 0.068 |
| Freon114 | 58 | 0.150 | 0.170 | 0.250 | 0.260 | 0.280 | 0.290 | 0.140 | 0.225 | 0.049 |
| Freon12 | 58 | 3.264 | 3.945 | 4.340 | 4.938 | 5.514 | 6.500 | 2.960 | 4.435 | 0.784 |
| Freon22 | 58 | 0.462 | 0.505 | 0.580 | 0.628 | 0.673 | 0.910 | 0.450 | 0.580 | 0.089 |
| Heptane | 58 | 0.059 | 0.104 | 0.130 | 0.170 | 0.223 | 0.460 | 0.040 | 0.144 | 0.073 |
| Hexachlorobutadiene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexane | 58 | 0.206 | 0.365 | 0.540 | 0.835 | 1.412 | 7.510 | 0.100 | 0.871 | 1.157 |
| Hexylbenzene | 53 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.050 | 0.000 | 0.012 | 0.015 |
| Indane | 58 | 0.010 | 0.020 | 0.030 | 0.033 | 0.040 | 0.060 | 0.010 | 0.029 | 0.011 |
| Isobutane | 58 | 0.156 | 0.300 | 0.470 | 0.775 | 1.041 | 1.310 | 0.120 | 0.545 | 0.317 |
| iso-Butylbenzene | 58 | 0.0097 | 0.010 | 0.020 | 0.020 | 0.030 | 0.040 | 0.000 | 0.018 | 0.008 |
| Isopentane | 58 | 0.340 | 0.649 | 0.878 | 1.278 | 1.485 | 2.573 | 0.290 | 0.990 | 0.471 |
| Isoprene | 56 | 0.000 | 0.030 | 0.050 | 0.103 | 0.210 | 0.660 | 0.000 | 0.093 | 0.125 |
| iso-Propylbenzene | 58 | 0.010 | 0.027 | 0.030 | 0.040 | 0.040 | 0.040 | 0.010 | 0.030 | 0.009 |

## Table 48 VOC Annual Statistics at Point Petre (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| m and p-Xylene | 58 | 0.110 | 0.250 | 0.359 | 0.448 | 0.536 | 1.380 | 0.090 | 0.363 | 0.197 |
| Methylcyclohexane | 58 | 0.020 | 0.040 | 0.050 | 0.079 | 0.090 | 0.120 | 0.000 | 0.057 | 0.028 |
| Methylcyclopentane | 58 | 0.050 | 0.100 | 0.150 | 0.192 | 0.269 | 0.710 | 0.030 | 0.170 | 0.122 |
| Naphthalene | 30 | 0.055 | 0.082 | 0.120 | 0.180 | 0.243 | 0.445 | 0.050 | 0.148 | 0.097 |
| n-Butylbenzene | 58 | 0.000 | 0.010 | 0.020 | 0.024 | 0.030 | 0.040 | 0.000 | 0.019 | 0.009 |
| Nonane | 58 | 0.020 | 0.040 | 0.050 | 0.064 | 0.080 | 0.350 | 0.000 | 0.060 | 0.051 |
| n-Propylbenzene | 58 | 0.020 | 0.030 | 0.040 | 0.050 | 0.060 | 0.080 | 0.010 | 0.042 | 0.015 |
| Octane | 58 | 0.030 | 0.050 | 0.060 | 0.080 | 0.100 | 0.360 | 0.020 | 0.069 | 0.046 |
| o-Xylene | 58 | 0.047 | 0.090 | 0.130 | 0.160 | 0.206 | 0.460 | 0.030 | 0.132 | 0.068 |
| p-Cymene | 58 | 0.000 | 0.020 | 0.035 | 0.065 | 0.090 | 0.130 | 0.000 | 0.041 | 0.035 |
| Pentane | 58 | 0.197 | 0.323 | 0.495 | 0.693 | 0.816 | 0.940 | 0.160 | 0.509 | 0.222 |
| Propane | 58 | 0.570 | 1.013 | 1.645 | 2.551 | 3.388 | 4.140 | 0.330 | 1.863 | 1.016 |
| Propylene | 58 | 0.100 | 0.137 | 0.165 | 0.208 | 0.296 | 3.110 | 0.080 | 0.237 | 0.398 |
| sec-Butylbenzene | 58 | 0.009 | 0.010 | 0.020 | 0.020 | 0.023 | 0.030 | 0.000 | 0.017 | 0.007 |
| Styrene | 56 | 0.000 | 0.030 | 0.040 | 0.060 | 0.070 | 0.350 | 0.000 | 0.046 | 0.049 |
| tert-Butylbenzene | 58 | 0.000 | 0.000 | 0.000 | 0.020 | 0.020 | 0.030 | 0.000 | 0.007 | 0.011 |
| Tetrachloroethylene | 58 | 0.129 | 0.170 | 0.235 | 0.290 | 0.350 | 0.730 | 0.100 | 0.247 | 0.104 |
| Toluene | 58 | 0.401 | 0.630 | 0.925 | 1.158 | 1.331 | 6.010 | 0.290 | 0.988 | 0.750 |
| trans-1,2-Dichloroethylene | 58 | 0.000 | 0.000 | 0.030 | 0.040 | 0.040 | 0.057 | 0.000 | 0.024 | 0.018 |
| trans-1,2-Dimethylcyclohe | 58 | 0.000 | 0.000 | 0.000 | 0.010 | 0.023 | 0.030 | 0.000 | 0.006 | 0.010 |
| trans-1,3-Dichloropropene | 58 | 0.000 | 0.000 | 0.000 | 0.020 | 0.020 | 0.060 | 0.000 | 0.009 | 0.013 |
| trans-1,4-Dimethylcyclohe | 58 | 0.000 | 0.000 | 0.010 | 0.010 | 0.020 | 0.040 | 0.000 | 0.010 | 0.009 |
| trans-2-Butene | 58 | 0.000 | 0.020 | 0.030 | 0.040 | 0.040 | 0.110 | 0.000 | 0.031 | 0.018 |
| trans-2-Heptene | 58 | 0.000 | 0.000 | 0.020 | 0.030 | 0.030 | 0.040 | 0.000 | 0.017 | 0.015 |
| trans-2-Hexene | 58 | 0.000 | 0.000 | 0.015 | 0.020 | 0.020 | 0.030 | 0.000 | 0.011 | 0.010 |
| trans-2-Octene | 19 | 0.000 | 0.000 | 0.000 | 0.000 | 0.012 | 0.030 | 0.000 | 0.003 | 0.008 |
| trans-2-Pentene | 58 | 0.000 | 0.009 | 0.020 | 0.030 | 0.030 | 0.070 | 0.000 | 0.018 | 0.013 |
| trans-3-Heptene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 | 0.000 | 0.002 |
| trans-3-Methyl-2-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 | 0.000 | 0.002 |
| trans-4-Methyl-2-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.000 | 0.001 | 0.004 |
| Trichloroethylene | 58 | 0.040 | 0.070 | 0.090 | 0.110 | 0.133 | 0.240 | 0.030 | 0.091 | 0.037 |
| Undecane | 57 | 0.062 | 0.080 | 0.100 | 0.130 | 0.230 | 1.220 | 0.040 | 0.147 | 0.172 |
| Vinylchloride | 58 | 0.000 | 0.011 | 0.029 | 0.030 | 0.030 | 0.040 | 0.000 | 0.021 | 0.011 |

*Note: VOC sites are operated by Environment Canada.*

## Table 49 VOC Annual Statistics at Sarnia (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 53 | 0.266 | 0.340 | 0.370 | 0.400 | 0.438 | 0.530 | 0.240 | 0.367 | 0.058 |
| 1,1,2,2-Tetrachloroethane | 53 | 0.000 | 0.022 | 0.060 | 0.070 | 0.080 | 0.100 | 0.000 | 0.049 | 0.027 |
| 1,1,2-Trichloroethane | 53 | 0.000 | 0.020 | 0.050 | 0.060 | 0.060 | 0.080 | 0.000 | 0.039 | 0.025 |
| 1,1-Dichloroethane | 53 | 0.000 | 0.000 | 0.040 | 0.050 | 0.060 | 0.070 | 0.000 | 0.030 | 0.025 |
| 1,1-Dichloroethylene | 53 | 0.000 | 0.030 | 0.065 | 0.080 | 0.090 | 0.120 | 0.000 | 0.058 | 0.032 |
| 1,2,3-Trimethylbenzene | 53 | 0.050 | 0.090 | 0.120 | 0.210 | 0.318 | 0.830 | 0.038 | 0.176 | 0.151 |
| 1,2,4-Trichlorobenzene | 53 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 53 | 0.182 | 0.360 | 0.480 | 0.790 | 1.316 | 3.660 | 0.152 | 0.686 | 0.614 |
| 1,2-Dichlorobenzene | 53 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 53 | 0.050 | 0.070 | 0.080 | 0.094 | 0.110 | 0.130 | 0.000 | 0.080 | 0.023 |
| 1,2-Dichloropropane | 53 | 0.000 | 0.000 | 0.030 | 0.050 | 0.050 | 0.060 | 0.000 | 0.024 | 0.023 |
| 1,2-Diethylbenzene | 53 | 0.011 | 0.020 | 0.030 | 0.040 | 0.048 | 0.090 | 0.000 | 0.031 | 0.017 |
| 1,3,5-Trimethylbenzene | 53 | 0.060 | 0.120 | 0.162 | 0.270 | 0.436 | 1.190 | 0.032 | 0.226 | 0.200 |
| 1,3-Butadiene | 53 | 0.052 | 0.080 | 0.160 | 0.452 | 0.970 | 2.230 | 0.040 | 0.366 | 0.443 |
| 1,3-Dichlorobenzene | 53 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 53 | 0.020 | 0.030 | 0.050 | 0.080 | 0.118 | 0.230 | 0.016 | 0.064 | 0.045 |
| 1,4-Dichlorobenzene | 53 | 0.050 | 0.070 | 0.110 | 0.150 | 0.316 | 0.820 | 0.040 | 0.156 | 0.149 |
| 1,4-Dichlorobutane | 53 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.050 | 0.000 | 0.008 | 0.014 |
| 1,4-Diethylbenzene | 51 | 0.051 | 0.085 | 0.110 | 0.190 | 0.270 | 0.650 | 0.040 | 0.155 | 0.120 |
| 1-Butene/Isobutene | 53 | 0.328 | 0.450 | 0.790 | 2.450 | 4.436 | 7.870 | 0.243 | 1.836 | 2.048 |
| 1-Butyne | 53 | 0.000 | 0.000 | 0.000 | 0.030 | 0.030 | 0.050 | 0.000 | 0.013 | 0.015 |
| 1-Decene | 34 | 0.000 | 0.000 | 0.050 | 0.083 | 0.127 | 0.820 | 0.000 | 0.076 | 0.147 |
| 1-Heptene | 34 | 0.067 | 0.090 | 0.140 | 0.230 | 0.364 | 0.710 | 0.060 | 0.188 | 0.136 |
| 1-Hexene | 53 | 0.136 | 0.200 | 0.330 | 0.570 | 1.192 | 9.080 | 0.000 | 0.810 | 1.673 |
| 1-Methylcyclohexene | 53 | 0.028 | 0.040 | 0.050 | 0.060 | 0.078 | 0.110 | 0.000 | 0.054 | 0.021 |
| 1-Methylcyclopentene | 53 | 0.027 | 0.050 | 0.060 | 0.090 | 0.136 | 0.240 | 0.000 | 0.072 | 0.046 |
| 1-Nonene | 34 | 0.000 | 0.000 | 0.000 | 0.040 | 0.080 | 0.350 | 0.000 | 0.036 | 0.074 |
| 1-Octene | 32 | 0.017 | 0.040 | 0.050 | 0.065 | 0.109 | 0.410 | 0.000 | 0.070 | 0.074 |
| 1-Pentene | 53 | 0.086 | 0.110 | 0.170 | 0.320 | 0.400 | 0.800 | 0.070 | 0.229 | 0.167 |
| 1-Propyne | 48 | 0.000 | 0.050 | 0.070 | 0.110 | 0.170 | 0.340 | 0.000 | 0.086 | 0.062 |
| 2,2,3-Trimethylbutane | 53 | 0.000 | 0.000 | 0.000 | 0.020 | 0.040 | 0.080 | 0.000 | 0.011 | 0.020 |
| 2,2,4-Trimethylpentane | 53 | 0.118 | 0.250 | 0.544 | 1.000 | 2.016 | 3.430 | 0.070 | 0.791 | 0.771 |
| 2,2,5-Trimethylhexane | 53 | 0.010 | 0.020 | 0.036 | 0.060 | 0.098 | 0.150 | 0.000 | 0.046 | 0.033 |
| 2,2-Dimethylbutane | 52 | 0.104 | 0.147 | 0.215 | 0.488 | 0.628 | 1.200 | 0.060 | 0.334 | 0.260 |
| 2,2-Dimethylhexane | 53 | 0.000 | 0.020 | 0.030 | 0.040 | 0.050 | 0.100 | 0.000 | 0.032 | 0.018 |
| 2,2-Dimethylpentane | 53 | 0.020 | 0.034 | 0.060 | 0.110 | 0.128 | 0.300 | 0.000 | 0.075 | 0.061 |
| 2,2-Dimethylpropane | 53 | 0.030 | 0.050 | 0.060 | 0.100 | 0.158 | 0.220 | 0.020 | 0.079 | 0.048 |

## Table 49 VOC Annual Statistics at Sarnia (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 53 | 0.052 | 0.100 | 0.190 | 0.300 | 0.520 | 1.000 | 0.030 | 0.249 | 0.220 |
| 2,3-Dimethylbutane | 53 | 0.070 | 0.180 | 0.320 | 0.900 | 1.154 | 2.700 | 0.000 | 0.560 | 0.522 |
| 2,3-Dimethylpentane | 53 | 0.097 | 0.170 | 0.260 | 0.430 | 0.624 | 1.340 | 0.070 | 0.331 | 0.237 |
| 2,4-Dimethylhexane | 53 | 0.045 | 0.070 | 0.130 | 0.190 | 0.278 | 0.640 | 0.020 | 0.157 | 0.127 |
| 2,4-Dimethylpentane | 53 | 0.042 | 0.080 | 0.150 | 0.290 | 0.448 | 0.830 | 0.000 | 0.204 | 0.170 |
| 2,5-Dimethylhexane | 53 | 0.030 | 0.050 | 0.094 | 0.150 | 0.230 | 0.460 | 0.028 | 0.121 | 0.096 |
| 2-Ethyl-1-Butene | 53 | 0.000 | 0.010 | 0.020 | 0.050 | 0.080 | 0.190 | 0.000 | 0.036 | 0.037 |
| 2-Ethyltoluene | 53 | 0.060 | 0.100 | 0.134 | 0.240 | 0.340 | 0.950 | 0.050 | 0.186 | 0.155 |
| 2-Methyl-1-butene | 53 | 0.036 | 0.120 | 0.250 | 0.510 | 0.718 | 1.900 | 0.000 | 0.368 | 0.390 |
| 2-Methyl-2-butene | 53 | 0.100 | 0.160 | 0.260 | 0.510 | 0.722 | 1.890 | 0.070 | 0.386 | 0.369 |
| 2-Methylheptane | 53 | 0.062 | 0.110 | 0.160 | 0.338 | 0.438 | 0.950 | 0.040 | 0.248 | 0.204 |
| 2-Methylhexane | 53 | 0.116 | 0.250 | 0.430 | 0.800 | 1.084 | 2.780 | 0.100 | 0.599 | 0.502 |
| 2-Methylpentane | 53 | 0.272 | 0.760 | 1.290 | 3.440 | 4.924 | 10.310 | 0.230 | 2.237 | 2.073 |
| 3,6-Dimethyloctane | 53 | 0.000 | 0.000 | 0.020 | 0.040 | 0.080 | 0.370 | 0.000 | 0.037 | 0.064 |
| 3-Ethyltoluene | 53 | 0.126 | 0.230 | 0.300 | 0.520 | 0.868 | 2.400 | 0.100 | 0.436 | 0.387 |
| 3-Methyl-1-pentene | 53 | 0.000 | 0.000 | 0.030 | 0.080 | 0.100 | 0.150 | 0.000 | 0.041 | 0.042 |
| 3-Methylheptane | 53 | 0.050 | 0.100 | 0.160 | 0.300 | 0.408 | 0.930 | 0.040 | 0.216 | 0.180 |
| 3-Methylhexane | 53 | 0.130 | 0.250 | 0.470 | 0.890 | 1.182 | 3.090 | 0.110 | 0.640 | 0.569 |
| 3-Methylpentane | 53 | 0.220 | 0.536 | 0.990 | 2.320 | 3.782 | 6.720 | 0.160 | 1.595 | 1.479 |
| 4-Ethyltoluene | 53 | 0.082 | 0.134 | 0.160 | 0.280 | 0.440 | 1.240 | 0.070 | 0.236 | 0.197 |
| 4-Methyl-1-pentene | 53 | 0.000 | 0.000 | 0.040 | 0.060 | 0.090 | 0.150 | 0.000 | 0.039 | 0.038 |
| 4-Methylheptane | 53 | 0.006 | 0.040 | 0.060 | 0.140 | 0.168 | 0.410 | 0.000 | 0.091 | 0.081 |
| Acetylene | 53 | 0.745 | 1.150 | 1.445 | 2.218 | 3.016 | 6.472 | 0.561 | 1.803 | 1.042 |
| Benzene | 53 | 0.506 | 0.660 | 1.140 | 1.850 | 3.908 | 11.130 | 0.306 | 1.806 | 1.915 |
| Benzylchloride | 53 | 0.020 | 0.030 | 0.050 | 0.060 | 0.070 | 0.140 | 0.020 | 0.049 | 0.021 |
| Bromodichloromethane | 38 | 0.000 | 0.080 | 0.090 | 0.110 | 0.126 | 0.190 | 0.000 | 0.089 | 0.041 |
| Bromoform | 53 | 0.020 | 0.030 | 0.050 | 0.063 | 0.078 | 0.100 | 0.020 | 0.051 | 0.021 |
| Bromomethane | 53 | 0.090 | 0.110 | 0.150 | 0.180 | 0.210 | 0.250 | 0.088 | 0.152 | 0.045 |
| Bromotrichloromethane | 5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Butane | 53 | 0.876 | 2.260 | 4.150 | 8.610 | 12.264 | 35.050 | 0.497 | 6.348 | 6.523 |
| Carbontetrachloride | 53 | 0.506 | 0.580 | 0.620 | 0.680 | 0.710 | 0.750 | 0.420 | 0.620 | 0.075 |
| Chlorobenzene | 53 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Chloroethane | 53 | 0.041 | 0.060 | 0.080 | 0.110 | 0.128 | 0.161 | 0.000 | 0.084 | 0.032 |
| Chloroform | 53 | 0.079 | 0.090 | 0.120 | 0.150 | 0.167 | 0.390 | 0.070 | 0.125 | 0.051 |
| Chloromethane | 53 | 0.994 | 1.180 | 1.290 | 2.150 | 4.379 | 10.660 | 0.880 | 2.276 | 2.175 |
| cis-1,2-Dichloroethylene | 53 | 0.000 | 0.020 | 0.040 | 0.050 | 0.060 | 0.070 | 0.000 | 0.034 | 0.023 |
| cis-1,2-Dimethylcyclohexa | 48 | 0.000 | 0.030 | 0.040 | 0.060 | 0.083 | 0.110 | 0.000 | 0.044 | 0.026 |

## Table 49 VOC Annual Statistics at Sarnia (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dichloropropene | 53 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.740 | 0.000 | 0.025 | 0.123 |
| cis-1,3-Dimethylcyclohexa | 51 | 0.025 | 0.040 | 0.060 | 0.113 | 0.170 | 0.420 | 0.010 | 0.095 | 0.087 |
| cis-1,4/t-1,3-Dimethylcycl | 53 | 0.000 | 0.020 | 0.020 | 0.040 | 0.076 | 0.170 | 0.000 | 0.037 | 0.035 |
| cis-2-Butene | 53 | 0.060 | 0.080 | 0.180 | 0.420 | 0.912 | 3.280 | 0.052 | 0.362 | 0.526 |
| cis-2-Heptene | 53 | 0.000 | 0.000 | 0.060 | 0.090 | 0.120 | 0.250 | 0.000 | 0.062 | 0.059 |
| cis-2-Hexene | 53 | 0.000 | 0.020 | 0.040 | 0.080 | 0.100 | 0.190 | 0.000 | 0.050 | 0.046 |
| cis-2-Pentene | 53 | 0.070 | 0.110 | 0.150 | 0.260 | 0.355 | 0.960 | 0.060 | 0.215 | 0.174 |
| cis-3-Methyl-2-pentene | 53 | 0.000 | 0.030 | 0.050 | 0.090 | 0.110 | 0.250 | 0.000 | 0.064 | 0.051 |
| cis-4-Methyl-2-pentene | 53 | 0.000 | 0.000 | 0.000 | 0.110 | 0.213 | 0.420 | 0.000 | 0.068 | 0.098 |
| Cyclohexane | 53 | 0.040 | 0.120 | 0.350 | 3.158 | 6.574 | 20.920 | 0.030 | 2.548 | 4.548 |
| Cyclohexene | 53 | 0.000 | 0.000 | 0.040 | 0.060 | 0.070 | 0.120 | 0.000 | 0.035 | 0.033 |
| Cyclopentane | 53 | 0.060 | 0.150 | 0.340 | 0.690 | 1.116 | 2.700 | 0.050 | 0.480 | 0.491 |
| Cyclopentene | 53 | 0.022 | 0.040 | 0.060 | 0.080 | 0.100 | 0.210 | 0.000 | 0.064 | 0.041 |
| Decane | 53 | 0.040 | 0.100 | 0.200 | 0.390 | 0.980 | 5.390 | 0.030 | 0.497 | 0.919 |
| Dibromochloromethane | 43 | 0.000 | 0.020 | 0.060 | 0.070 | 0.080 | 0.090 | 0.000 | 0.046 | 0.027 |
| Dibromomethane | 53 | 0.040 | 0.060 | 0.110 | 0.120 | 0.130 | 0.150 | 0.040 | 0.094 | 0.034 |
| Dichloromethane | 53 | 0.212 | 0.272 | 0.346 | 0.460 | 0.700 | 1.500 | 0.190 | 0.425 | 0.267 |
| Dodecane | 53 | 0.026 | 0.070 | 0.110 | 0.260 | 0.398 | 0.910 | 0.020 | 0.194 | 0.200 |
| EDB | 53 | 0.000 | 0.030 | 0.060 | 0.070 | 0.080 | 0.090 | 0.000 | 0.051 | 0.026 |
| Ethane | 53 | 2.340 | 3.313 | 5.328 | 9.746 | 11.348 | 16.577 | 1.567 | 6.488 | 3.673 |
| Ethylbenzene | 53 | 0.167 | 0.320 | 0.510 | 1.080 | 1.348 | 3.710 | 0.140 | 0.736 | 0.640 |
| Ethylbromide | 53 | 0.000 | 0.000 | 0.030 | 0.040 | 0.060 | 0.068 | 0.000 | 0.028 | 0.023 |
| Ethylene | 53 | 0.948 | 1.351 | 3.106 | 7.026 | 21.522 | 52.368 | 0.734 | 6.940 | 9.666 |
| Freon11 | 53 | 1.356 | 1.680 | 1.750 | 1.870 | 2.118 | 2.360 | 1.130 | 1.773 | 0.243 |
| Freon113 | 49 | 0.526 | 0.680 | 0.760 | 0.810 | 0.956 | 1.170 | 0.450 | 0.759 | 0.143 |
| Freon114 | 53 | 0.150 | 0.180 | 0.240 | 0.270 | 0.290 | 0.350 | 0.136 | 0.230 | 0.056 |
| Freon12 | 53 | 2.274 | 2.770 | 2.910 | 3.180 | 3.472 | 4.210 | 2.120 | 2.980 | 0.443 |
| Freon22 | 53 | 0.470 | 0.540 | 0.626 | 0.740 | 0.972 | 1.760 | 0.418 | 0.691 | 0.232 |
| Heptane | 53 | 0.133 | 0.250 | 0.380 | 0.704 | 0.926 | 2.200 | 0.100 | 0.563 | 0.489 |
| Hexachlorobutadiene | 53 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.180 | 0.000 | 0.003 | 0.025 |
| Hexane | 53 | 0.258 | 0.630 | 1.150 | 2.620 | 4.870 | 8.980 | 0.210 | 1.996 | 2.091 |
| Hexylbenzene | 46 | 0.000 | 0.000 | 0.000 | 0.038 | 0.065 | 0.120 | 0.000 | 0.022 | 0.031 |
| Indane | 53 | 0.038 | 0.060 | 0.070 | 0.110 | 0.168 | 0.400 | 0.030 | 0.095 | 0.065 |
| Isobutane | 53 | 0.438 | 0.940 | 2.080 | 6.209 | 8.364 | 19.190 | 0.240 | 3.744 | 4.071 |
| iso-Butylbenzene | 53 | 0.010 | 0.020 | 0.030 | 0.040 | 0.050 | 0.110 | 0.000 | 0.032 | 0.019 |
| Isopentane | 52 | 0.895 | 2.083 | 4.480 | 11.648 | 20.332 | 31.210 | 0.730 | 8.011 | 7.914 |
| Isoprene | 49 | 0.040 | 0.060 | 0.140 | 0.470 | 0.766 | 2.814 | 0.000 | 0.309 | 0.459 |

## Table 49 VOC Annual Statistics at Sarnia (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| iso-Propylbenzene | 53 | 0.030 | 0.040 | 0.050 | 0.090 | 0.110 | 0.240 | 0.020 | 0.068 | 0.039 |
| m and p-Xylene | 53 | 0.433 | 0.900 | 1.440 | 2.640 | 3.328 | 11.950 | 0.360 | 1.936 | 1.838 |
| Methylcyclohexane | 53 | 0.047 | 0.130 | 0.200 | 0.430 | 0.650 | 1.810 | 0.040 | 0.357 | 0.385 |
| Methylcyclopentane | 53 | 0.110 | 0.240 | 0.470 | 1.042 | 1.404 | 3.040 | 0.080 | 0.736 | 0.715 |
| Naphthalene | 27 | 0.066 | 0.140 | 0.220 | 0.328 | 0.529 | 1.229 | 0.040 | 0.279 | 0.245 |
| n-Butylbenzene | 53 | 0.020 | 0.030 | 0.040 | 0.060 | 0.088 | 0.200 | 0.018 | 0.054 | 0.038 |
| Nonane | 53 | 0.040 | 0.084 | 0.180 | 0.380 | 0.698 | 1.880 | 0.030 | 0.317 | 0.408 |
| n-Propylbenzene | 53 | 0.059 | 0.090 | 0.120 | 0.210 | 0.300 | 0.770 | 0.040 | 0.164 | 0.127 |
| Octane | 53 | 0.060 | 0.100 | 0.170 | 0.350 | 0.670 | 1.520 | 0.050 | 0.300 | 0.319 |
| o-Xylene | 53 | 0.162 | 0.310 | 0.484 | 0.810 | 1.174 | 3.190 | 0.140 | 0.632 | 0.536 |
| p-Cymene | 53 | 0.000 | 0.020 | 0.030 | 0.060 | 0.080 | 0.150 | 0.000 | 0.041 | 0.034 |
| Pentane | 53 | 0.526 | 1.050 | 2.490 | 4.780 | 6.929 | 19.040 | 0.470 | 3.497 | 3.575 |
| Propane | 53 | 1.166 | 2.180 | 5.122 | 12.060 | 17.850 | 51.670 | 0.820 | 8.234 | 8.825 |
| Propylene | 53 | 0.290 | 0.434 | 1.090 | 2.710 | 4.288 | 9.830 | 0.180 | 1.850 | 1.946 |
| sec-Butylbenzene | 53 | 0.012 | 0.020 | 0.030 | 0.040 | 0.058 | 0.130 | 0.000 | 0.034 | 0.023 |
| Styrene | 49 | 0.000 | 0.060 | 0.110 | 0.220 | 0.466 | 0.820 | 0.000 | 0.178 | 0.182 |
| tert-Butylbenzene | 53 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.070 | 0.000 | 0.012 | 0.016 |
| Tetrachloroethylene | 53 | 0.098 | 0.140 | 0.210 | 0.320 | 0.496 | 3.300 | 0.080 | 0.340 | 0.496 |
| Toluene | 53 | 0.641 | 1.570 | 2.450 | 5.190 | 9.638 | 19.440 | 0.550 | 4.091 | 4.142 |
| trans-1,2-Dichloroethylene | 53 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.025 | 0.019 |
| trans-1,2-Dimethylcyclohe: | 53 | 0.000 | 0.022 | 0.050 | 0.080 | 0.146 | 0.370 | 0.000 | 0.068 | 0.075 |
| trans-1,3-Dichloropropene | 53 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.610 | 0.000 | 0.029 | 0.105 |
| trans-1,4-Dimethylcyclohe: | 53 | 0.010 | 0.020 | 0.030 | 0.051 | 0.080 | 0.210 | 0.000 | 0.043 | 0.042 |
| trans-2-Butene | 53 | 0.060 | 0.080 | 0.180 | 0.420 | 0.938 | 4.290 | 0.000 | 0.398 | 0.659 |
| trans-2-Heptene | 53 | 0.000 | 0.000 | 0.030 | 0.040 | 0.060 | 0.080 | 0.000 | 0.028 | 0.023 |
| trans-2-Hexene | 53 | 0.014 | 0.030 | 0.050 | 0.100 | 0.118 | 0.230 | 0.000 | 0.066 | 0.050 |
| trans-2-Octene | 19 | 0.000 | 0.000 | 0.000 | 0.005 | 0.052 | 0.150 | 0.000 | 0.015 | 0.037 |
| trans-2-Pentene | 53 | 0.040 | 0.060 | 0.130 | 0.310 | 0.444 | 1.190 | 0.000 | 0.211 | 0.225 |
| trans-3-Heptene | 53 | 0.000 | 0.000 | 0.000 | 0.010 | 0.020 | 0.030 | 0.000 | 0.006 | 0.009 |
| trans-3-Methyl-2-pentene | 53 | 0.000 | 0.000 | 0.030 | 0.080 | 0.110 | 0.220 | 0.000 | 0.046 | 0.054 |
| trans-4-Methyl-2-pentene | 53 | 0.000 | 0.000 | 0.000 | 0.000 | 0.062 | 0.250 | 0.000 | 0.019 | 0.054 |
| Trichloroethylene | 53 | 0.050 | 0.070 | 0.110 | 0.150 | 0.193 | 0.840 | 0.030 | 0.133 | 0.120 |
| Undecane | 53 | 0.040 | 0.084 | 0.200 | 0.370 | 0.540 | 3.000 | 0.030 | 0.366 | 0.588 |
| Vinylchloride | 53 | 0.000 | 0.020 | 0.030 | 0.050 | 0.080 | 0.390 | 0.000 | 0.046 | 0.058 |

*Note: VOC sites are operated by Environment Canada.*

## Table 50 VOC Annual Statistics at Simcoe (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 58 | 0.350 | 0.370 | 0.390 | 0.420 | 0.460 | 6.100 | 0.280 | 0.497 | 0.750 |
| 1,1,2,2-Tetrachloroethane | 58 | 0.020 | 0.030 | 0.050 | 0.060 | 0.070 | 0.080 | 0.000 | 0.048 | 0.020 |
| 1,1,2-Trichloroethane | 58 | 0.000 | 0.023 | 0.045 | 0.060 | 0.060 | 0.100 | 0.000 | 0.039 | 0.025 |
| 1,1-Dichloroethane | 58 | 0.000 | 0.003 | 0.030 | 0.050 | 0.050 | 0.460 | 0.000 | 0.036 | 0.060 |
| 1,1-Dichloroethylene | 58 | 0.000 | 0.040 | 0.070 | 0.080 | 0.090 | 0.110 | 0.000 | 0.060 | 0.030 |
| 1,2,3-Trimethylbenzene | 58 | 0.020 | 0.040 | 0.050 | 0.080 | 0.120 | 0.190 | 0.020 | 0.061 | 0.035 |
| 1,2,4-Trichlorobenzene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 58 | 0.059 | 0.113 | 0.180 | 0.270 | 0.385 | 0.700 | 0.040 | 0.211 | 0.137 |
| 1,2-Dichlorobenzene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 58 | 0.050 | 0.065 | 0.070 | 0.080 | 0.090 | 0.130 | 0.042 | 0.074 | 0.015 |
| 1,2-Dichloropropane | 58 | 0.000 | 0.000 | 0.000 | 0.040 | 0.050 | 0.080 | 0.000 | 0.018 | 0.025 |
| 1,2-Diethylbenzene | 58 | 0.010 | 0.010 | 0.020 | 0.030 | 0.040 | 0.054 | 0.000 | 0.021 | 0.012 |
| 1,3,5-Trimethylbenzene | 58 | 0.020 | 0.040 | 0.060 | 0.090 | 0.133 | 0.240 | 0.010 | 0.074 | 0.049 |
| 1,3-Butadiene | 58 | 0.025 | 0.040 | 0.060 | 0.070 | 0.080 | 0.110 | 0.020 | 0.057 | 0.020 |
| 1,3-Dichlorobenzene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 58 | 0.010 | 0.020 | 0.027 | 0.040 | 0.050 | 0.060 | 0.010 | 0.029 | 0.013 |
| 1,4-Dichlorobenzene | 58 | 0.020 | 0.035 | 0.050 | 0.058 | 0.073 | 0.160 | 0.020 | 0.049 | 0.024 |
| 1,4-Dichlorobutane | 58 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.000 | 0.014 | 0.017 |
| 1,4-Diethylbenzene | 58 | 0.020 | 0.040 | 0.060 | 0.080 | 0.100 | 0.170 | 0.020 | 0.062 | 0.030 |
| 1-Butene/Isobutene | 58 | 0.210 | 0.273 | 0.325 | 0.380 | 0.503 | 0.710 | 0.180 | 0.342 | 0.101 |
| 1-Butyne | 58 | 0.000 | 0.000 | 0.000 | 0.030 | 0.030 | 0.040 | 0.000 | 0.011 | 0.015 |
| 1-Decene | 39 | 0.000 | 0.000 | 0.000 | 0.050 | 0.062 | 0.140 | 0.000 | 0.024 | 0.032 |
| 1-Heptene | 39 | 0.000 | 0.050 | 0.060 | 0.070 | 0.100 | 0.170 | 0.000 | 0.060 | 0.034 |
| 1-Hexene | 58 | 0.000 | 0.103 | 0.150 | 0.180 | 0.200 | 0.230 | 0.000 | 0.129 | 0.070 |
| 1-Methylcyclohexene | 58 | 0.000 | 0.030 | 0.040 | 0.050 | 0.063 | 0.070 | 0.000 | 0.039 | 0.021 |
| 1-Methylcyclopentene | 58 | 0.009 | 0.021 | 0.038 | 0.048 | 0.050 | 0.060 | 0.000 | 0.034 | 0.015 |
| 1-Nonene | 39 | 0.000 | 0.000 | 0.000 | 0.030 | 0.042 | 0.080 | 0.000 | 0.014 | 0.022 |
| 1-Octene | 37 | 0.000 | 0.020 | 0.030 | 0.040 | 0.054 | 0.070 | 0.000 | 0.032 | 0.019 |
| 1-Pentene | 58 | 0.039 | 0.060 | 0.080 | 0.098 | 0.110 | 0.160 | 0.000 | 0.079 | 0.030 |
| 1-Propyne | 53 | 0.000 | 0.000 | 0.040 | 0.050 | 0.068 | 0.080 | 0.000 | 0.033 | 0.026 |
| 2,2,3-Trimethylbutane | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.003 | 0.030 | 0.000 | 0.002 | 0.005 |
| 2,2,4-Trimethylpentane | 58 | 0.060 | 0.150 | 0.202 | 0.250 | 0.320 | 0.520 | 0.050 | 0.208 | 0.095 |
| 2,2,5-Trimethylhexane | 58 | 0.000 | 0.020 | 0.020 | 0.030 | 0.040 | 0.140 | 0.000 | 0.025 | 0.020 |
| 2,2-Dimethylbutane | 58 | 0.049 | 0.090 | 0.112 | 0.140 | 0.173 | 0.330 | 0.030 | 0.120 | 0.050 |
| 2,2-Dimethylhexane | 58 | 0.000 | 0.010 | 0.020 | 0.030 | 0.030 | 0.040 | 0.000 | 0.018 | 0.011 |
| 2,2-Dimethylpentane | 58 | 0.000 | 0.000 | 0.030 | 0.040 | 0.043 | 0.100 | 0.000 | 0.024 | 0.021 |
| 2,2-Dimethylpropane | 58 | 0.020 | 0.037 | 0.050 | 0.060 | 0.070 | 0.090 | 0.000 | 0.049 | 0.019 |

## Table 50 VOC Annual Statistics at Simcoe (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 58 | 0.020 | 0.050 | 0.070 | 0.090 | 0.100 | 0.180 | 0.020 | 0.072 | 0.031 |
| 2,3-Dimethylbutane | 58 | 0.039 | 0.090 | 0.115 | 0.180 | 0.194 | 0.620 | 0.030 | 0.137 | 0.095 |
| 2,3-Dimethylpentane | 58 | 0.030 | 0.080 | 0.110 | 0.140 | 0.180 | 0.280 | 0.000 | 0.112 | 0.055 |
| 2,4-Dimethylhexane | 58 | 0.020 | 0.040 | 0.059 | 0.070 | 0.080 | 0.120 | 0.020 | 0.056 | 0.020 |
| 2,4-Dimethylpentane | 58 | 0.000 | 0.040 | 0.060 | 0.080 | 0.092 | 0.190 | 0.000 | 0.058 | 0.035 |
| 2,5-Dimethylbenzaldehyde | 43 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2,5-Dimethylhexane | 58 | 0.020 | 0.024 | 0.040 | 0.050 | 0.060 | 0.102 | 0.000 | 0.040 | 0.020 |
| 2-Ethyl-1-Butene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.000 | 0.001 | 0.003 |
| 2-Ethyltoluene | 58 | 0.020 | 0.042 | 0.060 | 0.090 | 0.110 | 0.200 | 0.020 | 0.069 | 0.037 |
| 2-Methyl-1-butene | 57 | 0.000 | 0.000 | 0.070 | 0.090 | 0.114 | 0.250 | 0.000 | 0.063 | 0.050 |
| 2-Methyl-2-butene | 58 | 0.040 | 0.053 | 0.070 | 0.100 | 0.120 | 0.270 | 0.030 | 0.079 | 0.038 |
| 2-Methylheptane | 56 | 0.030 | 0.050 | 0.077 | 0.100 | 0.121 | 0.190 | 0.020 | 0.078 | 0.033 |
| 2-Methylhexane | 58 | 0.049 | 0.100 | 0.141 | 0.190 | 0.263 | 0.450 | 0.000 | 0.154 | 0.087 |
| 2-Methylpentane | 58 | 0.140 | 0.320 | 0.407 | 0.570 | 0.789 | 1.680 | 0.130 | 0.503 | 0.324 |
| 2-Pentanone/Isovaleraldehy | 43 | 0.000 | 0.000 | 0.064 | 0.131 | 0.196 | 0.351 | 0.000 | 0.085 | 0.092 |
| 3,6-Dimethyloctane | 58 | 0.000 | 0.000 | 0.000 | 0.018 | 0.020 | 0.050 | 0.000 | 0.007 | 0.012 |
| 3-Ethyltoluene | 58 | 0.039 | 0.080 | 0.110 | 0.180 | 0.223 | 0.450 | 0.020 | 0.138 | 0.092 |
| 3-Methyl-1-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.038 | 0.050 | 0.060 | 0.000 | 0.017 | 0.021 |
| 3-Methylheptane | 58 | 0.017 | 0.040 | 0.060 | 0.080 | 0.097 | 0.180 | 0.000 | 0.060 | 0.032 |
| 3-Methylhexane | 58 | 0.000 | 0.100 | 0.150 | 0.218 | 0.311 | 0.560 | 0.000 | 0.168 | 0.107 |
| 3-Methylpentane | 58 | 0.107 | 0.220 | 0.267 | 0.370 | 0.522 | 1.070 | 0.090 | 0.335 | 0.218 |
| 4-Ethyltoluene | 58 | 0.030 | 0.060 | 0.080 | 0.118 | 0.153 | 0.270 | 0.030 | 0.093 | 0.052 |
| 4-Methyl-1-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.040 | 0.050 | 0.060 | 0.000 | 0.019 | 0.022 |
| 4-Methylheptane | 58 | 0.000 | 0.000 | 0.030 | 0.036 | 0.050 | 0.090 | 0.000 | 0.024 | 0.019 |
| Acetaldehyde | 43 | 0.449 | 0.665 | 0.913 | 1.308 | 1.594 | 2.544 | 0.337 | 1.019 | 0.498 |
| Acetone | 43 | 0.999 | 1.733 | 2.769 | 3.788 | 4.445 | 6.139 | 0.258 | 2.840 | 1.384 |
| Acetylene | 58 | 0.429 | 0.676 | 0.959 | 1.266 | 2.017 | 4.064 | 0.269 | 1.130 | 0.735 |
| Acrolein | 43 | 0.000 | 0.000 | 0.000 | 0.035 | 0.051 | 0.136 | 0.000 | 0.018 | 0.028 |
| Benzaldehyde | 43 | 0.000 | 0.052 | 0.082 | 0.117 | 0.169 | 0.285 | 0.000 | 0.091 | 0.059 |
| Benzene | 58 | 0.279 | 0.443 | 0.590 | 0.758 | 0.946 | 1.240 | 0.190 | 0.624 | 0.246 |
| Benzylchloride | 58 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.070 | 0.000 | 0.039 | 0.019 |
| Bromodichloromethane | 42 | 0.000 | 0.053 | 0.080 | 0.080 | 0.090 | 0.110 | 0.000 | 0.067 | 0.027 |
| Bromoform | 58 | 0.025 | 0.040 | 0.050 | 0.060 | 0.070 | 0.090 | 0.020 | 0.051 | 0.017 |
| Bromomethane | 58 | 0.089 | 0.110 | 0.160 | 0.190 | 0.210 | 0.300 | 0.080 | 0.157 | 0.047 |
| Bromotrichloromethane | 8 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Butane | 58 | 0.618 | 1.033 | 1.585 | 2.319 | 3.726 | 7.340 | 0.380 | 1.925 | 1.288 |
| Carbontetrachloride | 58 | 0.567 | 0.623 | 0.670 | 0.690 | 0.710 | 0.750 | 0.310 | 0.650 | 0.076 |
| Chlorobenzene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.012 | 0.080 | 0.000 | 0.006 | 0.018 |

## Table 50 VOC Annual Statistics at Simcoe (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| Chloroethane | 58 | 0.035 | 0.050 | 0.070 | 0.090 | 0.100 | 0.110 | 0.000 | 0.070 | 0.025 |
| Chloroform | 58 | 0.079 | 0.090 | 0.110 | 0.120 | 0.143 | 0.260 | 0.070 | 0.113 | 0.031 |
| Chloromethane | 58 | 0.970 | 1.100 | 1.160 | 1.230 | 1.330 | 1.530 | 0.910 | 1.167 | 0.130 |
| cis-1,2-Dichloroethylene | 58 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.028 | 0.021 |
| cis-1,2-Dimethylcyclohexa | 53 | 0.000 | 0.020 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.031 | 0.015 |
| cis-1,3-Dichloropropene | 58 | 0.000 | 0.000 | 0.000 | 0.010 | 0.183 | 2.920 | 0.000 | 0.113 | 0.423 |
| cis-1,3-Dimethylcyclohexa | 56 | 0.010 | 0.030 | 0.040 | 0.050 | 0.065 | 0.120 | 0.010 | 0.040 | 0.022 |
| cis-1,4/t-1,3-Dimethylcycl | 58 | 0.000 | 0.010 | 0.011 | 0.020 | 0.020 | 0.050 | 0.000 | 0.014 | 0.011 |
| cis-2-Butene | 58 | 0.020 | 0.040 | 0.050 | 0.060 | 0.080 | 0.300 | 0.000 | 0.057 | 0.039 |
| cis-2-Heptene | 58 | 0.000 | 0.000 | 0.040 | 0.050 | 0.060 | 0.110 | 0.000 | 0.031 | 0.028 |
| cis-2-Hexene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.000 | 0.004 | 0.009 |
| cis-2-Pentene | 58 | 0.009 | 0.050 | 0.070 | 0.080 | 0.090 | 0.150 | 0.000 | 0.063 | 0.027 |
| cis-3-Methyl-2-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.050 | 0.000 | 0.011 | 0.015 |
| cis-4-Methyl-2-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.050 | 0.140 | 0.000 | 0.011 | 0.028 |
| Crotonaldehyde | 43 | 0.000 | 0.000 | 0.000 | 0.067 | 0.102 | 0.241 | 0.000 | 0.038 | 0.055 |
| Cyclohexane | 58 | 0.000 | 0.050 | 0.080 | 0.128 | 0.190 | 8.730 | 0.000 | 0.262 | 1.138 |
| Cyclohexene | 58 | 0.000 | 0.000 | 0.020 | 0.040 | 0.050 | 0.060 | 0.000 | 0.021 | 0.022 |
| Cyclopentane | 58 | 0.030 | 0.070 | 0.089 | 0.119 | 0.140 | 0.370 | 0.030 | 0.099 | 0.057 |
| Cyclopentene | 58 | 0.009 | 0.020 | 0.040 | 0.040 | 0.050 | 0.060 | 0.000 | 0.032 | 0.016 |
| Decane | 58 | 0.049 | 0.070 | 0.108 | 0.140 | 0.179 | 0.600 | 0.040 | 0.121 | 0.085 |
| Dibromochloromethane | 50 | 0.009 | 0.029 | 0.050 | 0.070 | 0.080 | 0.120 | 0.000 | 0.048 | 0.026 |
| Dibromomethane | 58 | 0.040 | 0.063 | 0.100 | 0.120 | 0.133 | 0.140 | 0.000 | 0.094 | 0.035 |
| Dichloromethane | 58 | 0.190 | 0.260 | 0.300 | 0.340 | 0.532 | 2.450 | 0.180 | 0.382 | 0.333 |
| Dodecane | 58 | 0.030 | 0.050 | 0.060 | 0.080 | 0.093 | 0.190 | 0.028 | 0.066 | 0.028 |
| EDB | 58 | 0.009 | 0.030 | 0.050 | 0.070 | 0.073 | 0.110 | 0.000 | 0.049 | 0.024 |
| Ethane | 58 | 1.551 | 2.595 | 3.195 | 4.558 | 5.202 | 10.474 | 0.592 | 3.636 | 1.849 |
| Ethylbenzene | 58 | 0.069 | 0.133 | 0.192 | 0.250 | 0.323 | 0.890 | 0.050 | 0.214 | 0.129 |
| Ethylbromide | 58 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.024 | 0.020 |
| Ethylene | 58 | 0.452 | 0.639 | 0.858 | 1.289 | 1.686 | 3.950 | 0.386 | 1.061 | 0.623 |
| Formaldehyde | 43 | 0.566 | 1.037 | 1.383 | 2.197 | 2.921 | 5.675 | 0.552 | 1.685 | 1.049 |
| Freon11 | 58 | 1.639 | 1.720 | 1.833 | 1.910 | 2.043 | 2.710 | 1.550 | 1.867 | 0.237 |
| Freon113 | 54 | 1.089 | 1.280 | 1.377 | 1.578 | 1.977 | 2.670 | 0.920 | 1.478 | 0.344 |
| Freon114 | 58 | 0.150 | 0.190 | 0.250 | 0.270 | 0.300 | 0.350 | 0.134 | 0.235 | 0.057 |
| Freon12 | 58 | 2.589 | 2.751 | 2.870 | 3.158 | 3.524 | 4.370 | 2.430 | 2.982 | 0.388 |
| Freon22 | 58 | 0.470 | 0.570 | 0.635 | 0.710 | 0.790 | 1.470 | 0.434 | 0.673 | 0.190 |
| Heptane | 58 | 0.050 | 0.143 | 0.185 | 0.228 | 0.333 | 0.460 | 0.040 | 0.196 | 0.091 |
| Hexachlorobutadiene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexanal | 43 | 0.000 | 0.000 | 0.050 | 0.109 | 0.151 | 0.321 | 0.000 | 0.068 | 0.078 |

## Table 50 VOC Annual Statistics at Simcoe (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| Hexane | 58 | 0.140 | 0.255 | 0.325 | 0.484 | 0.663 | 1.990 | 0.100 | 0.421 | 0.326 |
| Hexylbenzene | 53 | 0.000 | 0.000 | 0.000 | 0.020 | 0.060 | 0.080 | 0.000 | 0.016 | 0.024 |
| Indane | 58 | 0.019 | 0.030 | 0.040 | 0.050 | 0.060 | 0.090 | 0.010 | 0.038 | 0.016 |
| Isobutane | 58 | 0.284 | 0.450 | 0.690 | 1.163 | 1.695 | 2.840 | 0.180 | 0.892 | 0.579 |
| iso-Butylbenzene | 58 | 0.010 | 0.010 | 0.020 | 0.030 | 0.030 | 0.050 | 0.000 | 0.020 | 0.011 |
| Isopentane | 58 | 0.467 | 0.943 | 1.385 | 1.805 | 2.310 | 9.020 | 0.370 | 1.552 | 1.220 |
| Isoprene | 56 | 0.000 | 0.038 | 0.060 | 0.245 | 0.555 | 1.720 | 0.000 | 0.223 | 0.351 |
| iso-Propylbenzene | 58 | 0.019 | 0.030 | 0.040 | 0.048 | 0.050 | 0.090 | 0.010 | 0.037 | 0.015 |
| m and p-Xylene | 58 | 0.136 | 0.300 | 0.410 | 0.570 | 0.795 | 2.160 | 0.090 | 0.487 | 0.328 |
| MEK | 43 | 0.220 | 0.340 | 0.527 | 0.687 | 0.961 | 2.120 | 0.167 | 0.598 | 0.381 |
| Methylcyclohexane | 58 | 0.029 | 0.060 | 0.084 | 0.129 | 0.153 | 0.250 | 0.010 | 0.098 | 0.051 |
| Methylcyclopentane | 58 | 0.049 | 0.100 | 0.140 | 0.190 | 0.264 | 0.710 | 0.040 | 0.163 | 0.111 |
| MIBK | 43 | 0.000 | 0.000 | 0.000 | 0.000 | 0.086 | 0.200 | 0.000 | 0.019 | 0.043 |
| m-Tolualdehyde | 43 | 0.000 | 0.000 | 0.000 | 0.000 | 0.039 | 0.168 | 0.000 | 0.013 | 0.040 |
| Naphthalene | 30 | 0.060 | 0.090 | 0.130 | 0.241 | 0.472 | 0.740 | 0.050 | 0.205 | 0.175 |
| n-Butylbenzene | 58 | 0.010 | 0.020 | 0.020 | 0.030 | 0.040 | 0.070 | 0.000 | 0.025 | 0.013 |
| Nonane | 58 | 0.029 | 0.050 | 0.075 | 0.090 | 0.133 | 0.370 | 0.020 | 0.082 | 0.053 |
| n-Propylbenzene | 58 | 0.020 | 0.049 | 0.060 | 0.080 | 0.100 | 0.190 | 0.020 | 0.065 | 0.032 |
| Octane | 58 | 0.029 | 0.070 | 0.080 | 0.108 | 0.143 | 0.340 | 0.020 | 0.093 | 0.054 |
| o-Tolualdehyde | 43 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| o-Xylene | 58 | 0.059 | 0.105 | 0.155 | 0.228 | 0.273 | 0.780 | 0.040 | 0.178 | 0.113 |
| p-Cymene | 58 | 0.000 | 0.010 | 0.025 | 0.040 | 0.060 | 0.090 | 0.000 | 0.027 | 0.022 |
| Pentane | 58 | 0.306 | 0.603 | 0.785 | 1.000 | 1.327 | 8.600 | 0.000 | 0.991 | 1.158 |
| Propane | 58 | 0.997 | 1.543 | 2.295 | 3.550 | 4.931 | 8.100 | 0.640 | 2.798 | 1.745 |
| Propionaldehyde | 43 | 0.096 | 0.165 | 0.247 | 0.328 | 0.402 | 0.609 | 0.060 | 0.257 | 0.127 |
| Propylene | 58 | 0.135 | 0.190 | 0.255 | 0.320 | 0.463 | 0.650 | 0.110 | 0.281 | 0.129 |
| p-Tolualdehyde | 43 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| sec-Butylbenzene | 58 | 0.010 | 0.010 | 0.020 | 0.028 | 0.030 | 0.050 | 0.000 | 0.020 | 0.010 |
| Styrene | 52 | 0.000 | 0.040 | 0.055 | 0.070 | 0.107 | 0.190 | 0.000 | 0.059 | 0.042 |
| tert-Butylbenzene | 58 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.000 | 0.008 | 0.013 |
| Tetrachloroethylene | 58 | 0.079 | 0.120 | 0.145 | 0.178 | 0.268 | 9.100 | 0.070 | 0.324 | 1.178 |
| Toluene | 56 | 0.343 | 0.630 | 0.915 | 1.238 | 1.765 | 55.230 | 0.240 | 2.556 | 7.904 |
| trans-1,2-Dichloroethylene | 58 | 0.000 | 0.013 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.028 | 0.019 |
| trans-1,2-Dimethylcyclohe: | 58 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.100 | 0.000 | 0.021 | 0.020 |
| trans-1,3-Dichloropropene | 58 | 0.000 | 0.000 | 0.020 | 0.045 | 0.212 | 2.740 | 0.000 | 0.111 | 0.385 |
| trans-1,4-Dimethylcyclohe: | 58 | 0.000 | 0.010 | 0.010 | 0.020 | 0.030 | 0.060 | 0.000 | 0.016 | 0.010 |
| trans-2-Butene | 58 | 0.020 | 0.040 | 0.050 | 0.060 | 0.070 | 0.330 | 0.000 | 0.057 | 0.044 |
| trans-2-Heptene | 58 | 0.000 | 0.000 | 0.020 | 0.038 | 0.040 | 0.060 | 0.000 | 0.018 | 0.018 |

## Table 50 VOC Annual Statistics at Simcoe (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| trans-2-Hexene | 58 | 0.000 | 0.000 | 0.010 | 0.020 | 0.030 | 0.050 | 0.000 | 0.013 | 0.014 |
| trans-2-Octene | 19 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.000 | 0.002 | 0.007 |
| trans-2-Pentene | 58 | 0.000 | 0.019 | 0.030 | 0.050 | 0.070 | 0.170 | 0.000 | 0.037 | 0.029 |
| trans-3-Heptene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 | 0.001 | 0.003 |
| trans-3-Methyl-2-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| trans-4-Methyl-2-pentene | 58 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | 0.000 | 0.001 | 0.005 |
| Trichloroethylene | 58 | 0.040 | 0.070 | 0.090 | 0.100 | 0.130 | 0.290 | 0.030 | 0.091 | 0.045 |
| Undecane | 58 | 0.050 | 0.080 | 0.097 | 0.133 | 0.153 | 0.440 | 0.040 | 0.117 | 0.076 |
| Valeraldehyde | 43 | 0.000 | 0.000 | 0.057 | 0.141 | 0.296 | 0.367 | 0.000 | 0.094 | 0.113 |
| Vinylchloride | 58 | 0.000 | 0.011 | 0.030 | 0.030 | 0.030 | 0.040 | 0.000 | 0.022 | 0.012 |

*Note: VOC sites are operated by Environment Canada.*

## Table 51 VOC Annual Statistics at Stouffville (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 60 | 0.340 | 0.380 | 0.407 | 0.430 | 0.450 | 0.570 | 0.320 | 0.408 | 0.041 |
| 1,1,2,2-Tetrachloroethane | 60 | 0.019 | 0.030 | 0.060 | 0.070 | 0.080 | 0.090 | 0.000 | 0.050 | 0.023 |
| 1,1,2-Trichloroethane | 60 | 0.000 | 0.023 | 0.050 | 0.060 | 0.070 | 0.097 | 0.000 | 0.043 | 0.026 |
| 1,1-Dichloroethane | 60 | 0.000 | 0.026 | 0.040 | 0.050 | 0.060 | 0.320 | 0.000 | 0.046 | 0.051 |
| 1,1-Dichloroethylene | 60 | 0.000 | 0.030 | 0.080 | 0.080 | 0.090 | 0.100 | 0.000 | 0.061 | 0.031 |
| 1,2,3-Trimethylbenzene | 60 | 0.030 | 0.056 | 0.090 | 0.140 | 0.240 | 0.750 | 0.020 | 0.119 | 0.112 |
| 1,2,4-Trichlorobenzene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 60 | 0.090 | 0.195 | 0.295 | 0.513 | 0.823 | 3.080 | 0.020 | 0.430 | 0.463 |
| 1,2-Dichlorobenzene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 60 | 0.058 | 0.070 | 0.070 | 0.080 | 0.090 | 0.130 | 0.050 | 0.075 | 0.014 |
| 1,2-Dichloropropane | 60 | 0.000 | 0.000 | 0.000 | 0.043 | 0.050 | 0.110 | 0.000 | 0.021 | 0.027 |
| 1,2-Diethylbenzene | 60 | 0.010 | 0.017 | 0.020 | 0.040 | 0.041 | 0.080 | 0.000 | 0.026 | 0.015 |
| 1,3,5-Trimethylbenzene | 60 | 0.030 | 0.070 | 0.100 | 0.160 | 0.262 | 0.910 | 0.010 | 0.138 | 0.138 |
| 1,3-Butadiene | 60 | 0.040 | 0.060 | 0.080 | 0.110 | 0.160 | 0.320 | 0.030 | 0.097 | 0.061 |
| 1,3-Dichlorobenzene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.024 | 0.000 | 0.000 | 0.003 |
| 1,3-Diethylbenzene | 60 | 0.010 | 0.020 | 0.034 | 0.050 | 0.080 | 0.150 | 0.010 | 0.041 | 0.027 |
| 1,4-Dichlorobenzene | 60 | 0.040 | 0.050 | 0.070 | 0.103 | 0.150 | 0.310 | 0.030 | 0.084 | 0.048 |
| 1,4-Dichlorobutane | 60 | 0.000 | 0.000 | 0.000 | 0.020 | 0.040 | 0.050 | 0.000 | 0.010 | 0.016 |
| 1,4-Diethylbenzene | 58 | 0.029 | 0.060 | 0.086 | 0.128 | 0.213 | 0.500 | 0.020 | 0.110 | 0.085 |
| 1-Butene/Isobutene | 60 | 0.260 | 0.350 | 0.500 | 0.699 | 1.079 | 9.130 | 0.200 | 0.766 | 1.198 |
| 1-Butyne | 60 | 0.000 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.000 | 0.012 | 0.017 |
| 1-Decene | 39 | 0.000 | 0.000 | 0.050 | 0.075 | 0.102 | 0.250 | 0.000 | 0.046 | 0.054 |
| 1-Heptene | 39 | 0.050 | 0.075 | 0.130 | 0.180 | 0.206 | 1.070 | 0.040 | 0.164 | 0.176 |
| 1-Hexene | 60 | 0.070 | 0.150 | 0.180 | 0.240 | 0.291 | 1.080 | 0.000 | 0.215 | 0.156 |
| 1-Methylcyclohexene | 60 | 0.020 | 0.040 | 0.050 | 0.070 | 0.070 | 0.120 | 0.010 | 0.050 | 0.021 |
| 1-Methylcyclopentene | 60 | 0.020 | 0.030 | 0.041 | 0.060 | 0.090 | 0.660 | 0.000 | 0.066 | 0.103 |
| 1-Nonene | 39 | 0.000 | 0.000 | 0.000 | 0.040 | 0.060 | 0.180 | 0.000 | 0.023 | 0.038 |
| 1-Octene | 39 | 0.000 | 0.000 | 0.040 | 0.050 | 0.062 | 0.090 | 0.000 | 0.034 | 0.026 |
| 1-Pentene | 60 | 0.058 | 0.080 | 0.111 | 0.170 | 0.242 | 3.140 | 0.050 | 0.200 | 0.409 |
| 1-Propyne | 55 | 0.000 | 0.037 | 0.050 | 0.080 | 0.100 | 0.180 | 0.000 | 0.057 | 0.039 |
| 2,2,3-Trimethylbutane | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.021 | 0.080 | 0.000 | 0.006 | 0.016 |
| 2,2,4-Trimethylpentane | 60 | 0.100 | 0.236 | 0.335 | 0.568 | 0.777 | 4.580 | 0.050 | 0.480 | 0.612 |
| 2,2,5-Trimethylhexane | 60 | 0.010 | 0.020 | 0.030 | 0.034 | 0.060 | 0.140 | 0.000 | 0.031 | 0.023 |
| 2,2-Dimethylbutane | 60 | 0.060 | 0.110 | 0.146 | 0.205 | 0.341 | 2.980 | 0.040 | 0.225 | 0.380 |
| 2,2-Dimethylhexane | 60 | 0.000 | 0.020 | 0.030 | 0.040 | 0.050 | 0.080 | 0.000 | 0.029 | 0.019 |
| 2,2-Dimethylpentane | 60 | 0.000 | 0.020 | 0.030 | 0.051 | 0.090 | 0.310 | 0.000 | 0.050 | 0.059 |
| 2,2-Dimethylpropane | 60 | 0.028 | 0.040 | 0.050 | 0.063 | 0.091 | 0.270 | 0.020 | 0.058 | 0.037 |

## Table 51 VOC Annual Statistics at Stouffville (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 60 | 0.040 | 0.080 | 0.115 | 0.165 | 0.253 | 1.620 | 0.020 | 0.159 | 0.209 |
| 2,3-Dimethylbutane | 60 | 0.050 | 0.132 | 0.200 | 0.305 | 0.536 | 4.240 | 0.040 | 0.331 | 0.573 |
| 2,3-Dimethylpentane | 60 | 0.060 | 0.120 | 0.160 | 0.257 | 0.422 | 1.620 | 0.040 | 0.234 | 0.248 |
| 2,4-Dimethylhexane | 60 | 0.030 | 0.060 | 0.085 | 0.133 | 0.182 | 1.090 | 0.020 | 0.116 | 0.140 |
| 2,4-Dimethylpentane | 60 | 0.030 | 0.068 | 0.090 | 0.130 | 0.240 | 0.900 | 0.020 | 0.133 | 0.152 |
| 2,5-Dimethylhexane | 60 | 0.020 | 0.045 | 0.066 | 0.100 | 0.140 | 0.860 | 0.020 | 0.087 | 0.110 |
| 2-Ethyl-1-Butene | 60 | 0.000 | 0.000 | 0.010 | 0.020 | 0.040 | 0.600 | 0.000 | 0.028 | 0.089 |
| 2-Ethyltoluene | 60 | 0.030 | 0.060 | 0.090 | 0.140 | 0.240 | 0.690 | 0.020 | 0.122 | 0.107 |
| 2-Methyl-1-butene | 60 | 0.000 | 0.068 | 0.129 | 0.228 | 0.370 | 6.160 | 0.000 | 0.300 | 0.822 |
| 2-Methyl-2-butene | 60 | 0.060 | 0.090 | 0.138 | 0.289 | 0.431 | 10.440 | 0.040 | 0.438 | 1.393 |
| 2-Methylheptane | 60 | 0.050 | 0.090 | 0.159 | 0.213 | 0.311 | 0.900 | 0.030 | 0.182 | 0.143 |
| 2-Methylhexane | 60 | 0.090 | 0.170 | 0.270 | 0.444 | 0.761 | 4.380 | 0.000 | 0.426 | 0.626 |
| 2-Methylpentane | 60 | 0.170 | 0.459 | 0.718 | 1.093 | 2.273 | 14.680 | 0.140 | 1.262 | 2.139 |
| 3,6-Dimethyloctane | 60 | 0.000 | 0.000 | 0.020 | 0.030 | 0.050 | 0.120 | 0.000 | 0.020 | 0.024 |
| 3-Ethyltoluene | 60 | 0.050 | 0.125 | 0.190 | 0.310 | 0.522 | 1.920 | 0.020 | 0.267 | 0.282 |
| 3-Methyl-1-pentene | 60 | 0.000 | 0.000 | 0.000 | 0.050 | 0.070 | 0.370 | 0.000 | 0.031 | 0.056 |
| 3-Methylheptane | 60 | 0.040 | 0.070 | 0.125 | 0.180 | 0.262 | 0.850 | 0.000 | 0.151 | 0.134 |
| 3-Methylhexane | 60 | 0.080 | 0.178 | 0.296 | 0.515 | 0.900 | 4.940 | 0.040 | 0.484 | 0.699 |
| 3-Methylpentane | 60 | 0.139 | 0.348 | 0.460 | 0.808 | 1.413 | 8.680 | 0.100 | 0.823 | 1.257 |
| 4-Ethyltoluene | 60 | 0.030 | 0.089 | 0.114 | 0.190 | 0.301 | 1.090 | 0.030 | 0.161 | 0.156 |
| 4-Methyl-1-pentene | 60 | 0.000 | 0.000 | 0.030 | 0.053 | 0.070 | 0.280 | 0.000 | 0.034 | 0.046 |
| 4-Methylheptane | 60 | 0.000 | 0.030 | 0.060 | 0.080 | 0.131 | 0.310 | 0.000 | 0.066 | 0.057 |
| Acetylene | 60 | 0.562 | 0.805 | 1.117 | 1.658 | 2.167 | 4.300 | 0.448 | 1.333 | 0.757 |
| Benzene | 60 | 0.389 | 0.550 | 0.735 | 1.116 | 1.460 | 6.550 | 0.330 | 0.960 | 0.881 |
| Benzylchloride | 60 | 0.020 | 0.030 | 0.050 | 0.060 | 0.070 | 0.070 | 0.020 | 0.046 | 0.017 |
| Bromodichloromethane | 44 | 0.000 | 0.068 | 0.090 | 0.100 | 0.107 | 0.260 | 0.000 | 0.078 | 0.046 |
| Bromoform | 60 | 0.030 | 0.040 | 0.055 | 0.070 | 0.090 | 0.090 | 0.026 | 0.055 | 0.020 |
| Bromomethane | 60 | 0.094 | 0.110 | 0.165 | 0.190 | 0.200 | 0.260 | 0.076 | 0.153 | 0.041 |
| Bromotrichloromethane | 6 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Butane | 60 | 0.864 | 1.403 | 2.795 | 4.223 | 7.007 | 49.520 | 0.710 | 4.456 | 7.041 |
| Carbontetrachloride | 60 | 0.503 | 0.598 | 0.650 | 0.680 | 0.700 | 0.750 | 0.345 | 0.627 | 0.084 |
| Chlorobenzene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Chloroethane | 60 | 0.050 | 0.068 | 0.100 | 0.120 | 0.140 | 0.210 | 0.040 | 0.097 | 0.034 |
| Chloroform | 60 | 0.080 | 0.090 | 0.120 | 0.140 | 0.161 | 0.200 | 0.070 | 0.120 | 0.034 |
| Chloromethane | 60 | 1.012 | 1.120 | 1.170 | 1.218 | 1.324 | 1.450 | 0.950 | 1.182 | 0.104 |
| cis-1,2-Dichloroethylene | 60 | 0.000 | 0.010 | 0.040 | 0.050 | 0.050 | 0.074 | 0.000 | 0.031 | 0.020 |
| cis-1,2-Dimethylcyclohexa | 55 | 0.000 | 0.025 | 0.040 | 0.060 | 0.076 | 0.100 | 0.000 | 0.043 | 0.026 |
| cis-1,3-Dichloropropene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.010 | 0.000 | 0.001 | 0.003 |

## Table 51 VOC Annual Statistics at Stouffville (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| cis-1,3-Dimethylcyclohexa | 56 | 0.020 | 0.030 | 0.080 | 0.110 | 0.160 | 0.330 | 0.010 | 0.087 | 0.070 |
| cis-1,4/t-1,3-Dimethylcycl | 60 | 0.000 | 0.010 | 0.030 | 0.040 | 0.061 | 0.110 | 0.000 | 0.031 | 0.025 |
| cis-2-Butene | 60 | 0.040 | 0.060 | 0.086 | 0.180 | 0.333 | 6.570 | 0.030 | 0.281 | 0.862 |
| cis-2-Heptene | 60 | 0.000 | 0.000 | 0.035 | 0.050 | 0.071 | 0.110 | 0.000 | 0.033 | 0.032 |
| cis-2-Hexene | 60 | 0.000 | 0.000 | 0.000 | 0.033 | 0.061 | 0.580 | 0.000 | 0.033 | 0.093 |
| cis-2-Pentene | 60 | 0.040 | 0.080 | 0.100 | 0.170 | 0.212 | 3.750 | 0.030 | 0.205 | 0.499 |
| cis-3-Methyl-2-pentene | 60 | 0.000 | 0.000 | 0.030 | 0.050 | 0.071 | 0.760 | 0.000 | 0.049 | 0.111 |
| cis-4-Methyl-2-pentene | 60 | 0.000 | 0.000 | 0.000 | 0.050 | 0.080 | 1.010 | 0.000 | 0.038 | 0.132 |
| Cyclohexane | 60 | 0.029 | 0.070 | 0.100 | 0.169 | 0.361 | 1.780 | 0.000 | 0.184 | 0.288 |
| Cyclohexene | 60 | 0.000 | 0.000 | 0.000 | 0.050 | 0.060 | 0.170 | 0.000 | 0.027 | 0.034 |
| Cyclopentane | 60 | 0.040 | 0.115 | 0.152 | 0.248 | 0.482 | 3.410 | 0.030 | 0.294 | 0.531 |
| Cyclopentene | 58 | 0.009 | 0.020 | 0.044 | 0.060 | 0.090 | 0.860 | 0.000 | 0.065 | 0.120 |
| Decane | 60 | 0.040 | 0.086 | 0.185 | 0.253 | 0.466 | 1.100 | 0.030 | 0.234 | 0.203 |
| Dibromochloromethane | 54 | 0.017 | 0.030 | 0.050 | 0.078 | 0.080 | 0.120 | 0.000 | 0.053 | 0.029 |
| Dibromomethane | 60 | 0.044 | 0.060 | 0.100 | 0.130 | 0.140 | 0.160 | 0.000 | 0.093 | 0.040 |
| Dichloromethane | 60 | 0.200 | 0.313 | 0.475 | 1.008 | 1.785 | 10.140 | 0.180 | 1.068 | 1.820 |
| Dodecane | 60 | 0.030 | 0.049 | 0.085 | 0.130 | 0.213 | 0.710 | 0.000 | 0.114 | 0.115 |
| EDB | 60 | 0.019 | 0.030 | 0.060 | 0.070 | 0.080 | 0.100 | 0.000 | 0.053 | 0.026 |
| Ethane | 60 | 1.557 | 2.412 | 3.150 | 3.966 | 5.119 | 8.434 | 0.604 | 3.330 | 1.394 |
| Ethylbenzene | 60 | 0.090 | 0.242 | 0.370 | 0.680 | 1.053 | 4.180 | 0.070 | 0.549 | 0.601 |
| Ethylbromide | 60 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.060 | 0.000 | 0.026 | 0.020 |
| Ethylene | 60 | 0.657 | 0.992 | 1.356 | 2.064 | 2.978 | 4.226 | 0.622 | 1.688 | 0.925 |
| Freon11 | 60 | 1.609 | 1.698 | 1.765 | 1.880 | 2.030 | 8.520 | 1.540 | 1.962 | 0.956 |
| Freon113 | 54 | 0.740 | 0.770 | 0.790 | 0.838 | 0.850 | 0.950 | 0.730 | 0.803 | 0.047 |
| Freon114 | 60 | 0.160 | 0.170 | 0.260 | 0.280 | 0.300 | 0.320 | 0.128 | 0.235 | 0.056 |
| Freon12 | 60 | 2.549 | 2.678 | 2.770 | 2.903 | 3.038 | 6.740 | 2.480 | 2.871 | 0.543 |
| Freon22 | 60 | 0.480 | 0.570 | 0.640 | 0.763 | 0.892 | 2.300 | 0.440 | 0.700 | 0.276 |
| Heptane | 60 | 0.120 | 0.220 | 0.330 | 0.498 | 0.954 | 5.260 | 0.060 | 0.490 | 0.688 |
| Hexachlorobutadiene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Hexane | 60 | 0.168 | 0.357 | 0.510 | 0.985 | 1.665 | 8.040 | 0.100 | 0.906 | 1.321 |
| Hexylbenzene | 52 | 0.000 | 0.000 | 0.000 | 0.030 | 0.059 | 0.080 | 0.000 | 0.017 | 0.024 |
| Indane | 60 | 0.020 | 0.040 | 0.050 | 0.080 | 0.111 | 0.400 | 0.010 | 0.067 | 0.057 |
| Isobutane | 60 | 0.340 | 0.623 | 1.170 | 1.987 | 3.719 | 25.870 | 0.310 | 1.976 | 3.467 |
| iso-Butylbenzene | 60 | 0.010 | 0.013 | 0.030 | 0.033 | 0.050 | 0.070 | 0.010 | 0.027 | 0.014 |
| Isopentane | 60 | 0.610 | 1.500 | 2.205 | 3.995 | 8.858 | 82.390 | 0.510 | 5.321 | 11.559 |
| Isoprene | 56 | 0.000 | 0.060 | 0.115 | 0.263 | 0.465 | 1.020 | 0.000 | 0.200 | 0.235 |
| iso-Propylbenzene | 60 | 0.020 | 0.038 | 0.047 | 0.060 | 0.081 | 0.180 | 0.020 | 0.051 | 0.028 |

## Table 51 VOC Annual Statistics at Stouffville (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| m and p-Xylene | 60 | 0.250 | 0.623 | 0.980 | 1.980 | 2.823 | 15.560 | 0.190 | 1.591 | 2.152 |
| Methylcyclohexane | 60 | 0.050 | 0.110 | 0.235 | 0.357 | 0.506 | 1.920 | 0.030 | 0.285 | 0.280 |
| Methylcyclopentane | 60 | 0.070 | 0.153 | 0.230 | 0.410 | 0.803 | 4.240 | 0.050 | 0.420 | 0.667 |
| Naphthalene | 30 | 0.065 | 0.098 | 0.152 | 0.170 | 0.406 | 0.700 | 0.060 | 0.186 | 0.158 |
| n-Butylbenzene | 60 | 0.010 | 0.020 | 0.030 | 0.050 | 0.080 | 0.160 | 0.000 | 0.040 | 0.027 |
| Nonane | 60 | 0.030 | 0.069 | 0.140 | 0.190 | 0.321 | 0.770 | 0.030 | 0.171 | 0.135 |
| n-Propylbenzene | 60 | 0.030 | 0.067 | 0.090 | 0.120 | 0.211 | 0.680 | 0.020 | 0.112 | 0.098 |
| Octane | 60 | 0.040 | 0.089 | 0.150 | 0.235 | 0.344 | 0.690 | 0.030 | 0.183 | 0.141 |
| o-Xylene | 60 | 0.090 | 0.192 | 0.314 | 0.579 | 0.866 | 3.750 | 0.060 | 0.476 | 0.544 |
| p-Cymene | 60 | 0.000 | 0.020 | 0.035 | 0.063 | 0.090 | 0.190 | 0.000 | 0.045 | 0.036 |
| Pentane | 60 | 0.455 | 0.889 | 1.315 | 2.161 | 4.516 | 33.790 | 0.350 | 2.860 | 5.479 |
| Propane | 60 | 1.327 | 2.185 | 2.810 | 4.598 | 5.782 | 8.790 | 1.070 | 3.488 | 1.820 |
| Propylene | 60 | 0.209 | 0.305 | 0.395 | 0.615 | 0.890 | 1.930 | 0.150 | 0.539 | 0.384 |
| sec-Butylbenzene | 60 | 0.010 | 0.020 | 0.030 | 0.040 | 0.050 | 0.070 | 0.010 | 0.029 | 0.015 |
| Styrene | 56 | 0.000 | 0.050 | 0.073 | 0.153 | 0.240 | 0.610 | 0.000 | 0.115 | 0.124 |
| tert-Butylbenzene | 60 | 0.000 | 0.000 | 0.000 | 0.030 | 0.030 | 0.060 | 0.000 | 0.011 | 0.016 |
| Tetrachloroethylene | 60 | 0.120 | 0.208 | 0.292 | 0.380 | 0.561 | 0.860 | 0.100 | 0.320 | 0.162 |
| Toluene | 60 | 0.589 | 1.438 | 2.445 | 4.463 | 6.377 | 25.510 | 0.410 | 3.377 | 3.654 |
| trans-1,2-Dichloroethylene | 58 | 0.000 | 0.000 | 0.035 | 0.040 | 0.040 | 0.052 | 0.000 | 0.026 | 0.019 |
| trans-1,2-Dimethylcyclohe: | 60 | 0.000 | 0.019 | 0.050 | 0.080 | 0.111 | 0.240 | 0.000 | 0.055 | 0.051 |
| trans-1,3-Dichloropropene | 60 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.030 | 0.000 | 0.009 | 0.012 |
| trans-1,4-Dimethylcyclohe: | 60 | 0.010 | 0.020 | 0.030 | 0.050 | 0.071 | 0.150 | 0.000 | 0.038 | 0.029 |
| trans-2-Butene | 60 | 0.040 | 0.068 | 0.095 | 0.200 | 0.368 | 7.500 | 0.040 | 0.318 | 0.990 |
| trans-2-Heptene | 60 | 0.000 | 0.000 | 0.030 | 0.040 | 0.050 | 0.170 | 0.000 | 0.028 | 0.030 |
| trans-2-Hexene | 60 | 0.000 | 0.010 | 0.022 | 0.043 | 0.071 | 0.770 | 0.000 | 0.051 | 0.122 |
| trans-2-Octene | 21 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.050 | 0.000 | 0.002 | 0.011 |
| trans-2-Pentene | 60 | 0.020 | 0.040 | 0.070 | 0.195 | 0.273 | 6.070 | 0.010 | 0.256 | 0.829 |
| trans-3-Heptene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.080 | 0.000 | 0.004 | 0.012 |
| trans-3-Methyl-2-pentene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.051 | 0.690 | 0.000 | 0.029 | 0.103 |
| trans-4-Methyl-2-pentene | 60 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.180 | 0.000 | 0.006 | 0.025 |
| Trichloroethylene | 60 | 0.030 | 0.080 | 0.123 | 0.193 | 0.322 | 1.190 | 0.020 | 0.180 | 0.199 |
| Undecane | 60 | 0.040 | 0.095 | 0.150 | 0.243 | 0.432 | 1.530 | 0.020 | 0.212 | 0.218 |
| Vinylchloride | 60 | 0.010 | 0.020 | 0.030 | 0.040 | 0.040 | 0.050 | 0.000 | 0.028 | 0.011 |

*Note: VOC sites are operated by Environment Canada.*

## Table 52 VOC Annual Statistics at Windsor (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 1,1,1-Trichloroethane | 41 | 0.320 | 0.350 | 0.370 | 0.380 | 0.400 | 0.756 | 0.210 | 0.374 | 0.070 |
| 1,1,2,2-Tetrachloroethane | 41 | 0.000 | 0.026 | 0.040 | 0.060 | 0.070 | 0.090 | 0.000 | 0.041 | 0.024 |
| 1,1,2-Trichloroethane | 41 | 0.000 | 0.000 | 0.030 | 0.050 | 0.060 | 0.060 | 0.000 | 0.029 | 0.023 |
| 1,1-Dichloroethane | 41 | 0.000 | 0.000 | 0.020 | 0.040 | 0.050 | 0.060 | 0.000 | 0.023 | 0.023 |
| 1,1-Dichloroethylene | 41 | 0.000 | 0.022 | 0.040 | 0.080 | 0.090 | 0.100 | 0.000 | 0.047 | 0.032 |
| 1,2,3-Trimethylbenzene | 41 | 0.080 | 0.110 | 0.150 | 0.200 | 0.306 | 0.800 | 0.060 | 0.185 | 0.138 |
| 1,2,4-Trichlorobenzene | 41 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2,4-Trimethylbenzene | 41 | 0.296 | 0.420 | 0.560 | 0.800 | 1.334 | 3.360 | 0.260 | 0.747 | 0.603 |
| 1,2-Dichlorobenzene | 41 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,2-Dichloroethane | 41 | 0.054 | 0.060 | 0.070 | 0.080 | 0.090 | 0.100 | 0.050 | 0.073 | 0.015 |
| 1,2-Dichloropropane | 38 | 0.000 | 0.000 | 0.000 | 0.040 | 0.050 | 0.060 | 0.000 | 0.020 | 0.024 |
| 1,2-Diethylbenzene | 41 | 0.000 | 0.020 | 0.030 | 0.030 | 0.042 | 0.070 | 0.000 | 0.027 | 0.016 |
| 1,3,5-Trimethylbenzene | 41 | 0.100 | 0.130 | 0.180 | 0.270 | 0.418 | 1.070 | 0.090 | 0.245 | 0.190 |
| 1,3-Butadiene | 41 | 0.070 | 0.090 | 0.114 | 0.160 | 0.260 | 0.380 | 0.060 | 0.143 | 0.079 |
| 1,3-Dichlorobenzene | 41 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1,3-Diethylbenzene | 41 | 0.030 | 0.040 | 0.050 | 0.070 | 0.090 | 0.200 | 0.030 | 0.060 | 0.035 |
| 1,4-Dichlorobenzene | 41 | 0.046 | 0.060 | 0.080 | 0.110 | 0.170 | 0.380 | 0.040 | 0.098 | 0.065 |
| 1,4-Dichlorobutane | 41 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.000 | 0.008 | 0.014 |
| 1,4-Diethylbenzene | 41 | 0.080 | 0.098 | 0.120 | 0.180 | 0.320 | 0.620 | 0.070 | 0.166 | 0.114 |
| 1-Butene/Isobutene | 41 | 0.330 | 0.390 | 0.430 | 0.600 | 0.930 | 1.280 | 0.300 | 0.550 | 0.247 |
| 1-Butyne | 41 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.000 | 0.010 | 0.015 |
| 1-Decene | 18 | 0.000 | 0.000 | 0.040 | 0.060 | 0.116 | 0.160 | 0.000 | 0.043 | 0.050 |
| 1-Heptene | 20 | 0.059 | 0.080 | 0.105 | 0.153 | 0.205 | 0.290 | 0.040 | 0.124 | 0.064 |
| 1-Hexene | 41 | 0.110 | 0.130 | 0.180 | 0.230 | 0.306 | 0.400 | 0.000 | 0.193 | 0.085 |
| 1-Methylcyclohexene | 41 | 0.020 | 0.040 | 0.050 | 0.060 | 0.072 | 0.114 | 0.020 | 0.050 | 0.019 |
| 1-Methylcyclopentene | 41 | 0.030 | 0.040 | 0.050 | 0.070 | 0.120 | 0.180 | 0.030 | 0.062 | 0.036 |
| 1-Nonene | 20 | 0.000 | 0.000 | 0.040 | 0.055 | 0.081 | 0.090 | 0.000 | 0.035 | 0.033 |
| 1-Octene | 20 | 0.000 | 0.015 | 0.030 | 0.050 | 0.060 | 0.070 | 0.000 | 0.032 | 0.023 |
| 1-Pentene | 41 | 0.082 | 0.100 | 0.120 | 0.180 | 0.210 | 0.370 | 0.080 | 0.146 | 0.065 |
| 1-Propyne | 36 | 0.060 | 0.070 | 0.080 | 0.100 | 0.145 | 0.220 | 0.050 | 0.093 | 0.038 |
| 2,2,3-Trimethylbutane | 41 | 0.000 | 0.000 | 0.000 | 0.010 | 0.030 | 0.040 | 0.000 | 0.007 | 0.013 |
| 2,2,4-Trimethylpentane | 41 | 0.210 | 0.270 | 0.370 | 0.510 | 0.880 | 1.794 | 0.190 | 0.481 | 0.329 |
| 2,2,5-Trimethylhexane | 41 | 0.020 | 0.030 | 0.040 | 0.050 | 0.090 | 0.186 | 0.020 | 0.051 | 0.034 |
| 2,2-Dimethylbutane | 41 | 0.110 | 0.140 | 0.190 | 0.230 | 0.272 | 0.440 | 0.100 | 0.193 | 0.072 |
| 2,2-Dimethylhexane | 41 | 0.010 | 0.020 | 0.030 | 0.030 | 0.040 | 0.070 | 0.010 | 0.028 | 0.013 |
| 2,2-Dimethylpentane | 41 | 0.030 | 0.040 | 0.050 | 0.060 | 0.100 | 0.180 | 0.000 | 0.055 | 0.032 |
| 2,2-Dimethylpropane | 41 | 0.030 | 0.040 | 0.060 | 0.070 | 0.080 | 0.100 | 0.030 | 0.055 | 0.017 |

## Table 52 VOC Annual Statistics at Windsor (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| 2,3,4-Trimethylpentane | 41 | 0.080 | 0.100 | 0.140 | 0.200 | 0.350 | 0.684 | 0.060 | 0.182 | 0.127 |
| 2,3-Dimethylbutane | 41 | 0.160 | 0.220 | 0.270 | 0.420 | 0.550 | 1.000 | 0.140 | 0.337 | 0.187 |
| 2,3-Dimethylpentane | 41 | 0.140 | 0.170 | 0.210 | 0.290 | 0.480 | 0.876 | 0.120 | 0.277 | 0.165 |
| 2,4-Dimethylhexane | 41 | 0.060 | 0.070 | 0.090 | 0.120 | 0.208 | 0.306 | 0.050 | 0.110 | 0.059 |
| 2,4-Dimethylpentane | 41 | 0.070 | 0.090 | 0.110 | 0.180 | 0.290 | 0.526 | 0.050 | 0.155 | 0.105 |
| 2,5-Dimethylbenzaldehyde | 33 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2,5-Dimethylhexane | 41 | 0.050 | 0.060 | 0.070 | 0.100 | 0.170 | 0.288 | 0.040 | 0.091 | 0.052 |
| 2-Ethyl-1-Butene | 41 | 0.000 | 0.010 | 0.020 | 0.030 | 0.040 | 0.090 | 0.000 | 0.022 | 0.020 |
| 2-Ethyltoluene | 41 | 0.080 | 0.120 | 0.150 | 0.200 | 0.332 | 0.820 | 0.080 | 0.192 | 0.143 |
| 2-Methyl-1-butene | 41 | 0.070 | 0.110 | 0.130 | 0.200 | 0.300 | 0.570 | 0.000 | 0.168 | 0.118 |
| 2-Methyl-2-butene | 41 | 0.120 | 0.160 | 0.200 | 0.320 | 0.520 | 0.890 | 0.090 | 0.270 | 0.185 |
| 2-Methylheptane | 41 | 0.100 | 0.120 | 0.160 | 0.190 | 0.350 | 0.512 | 0.080 | 0.188 | 0.103 |
| 2-Methylhexane | 41 | 0.210 | 0.280 | 0.330 | 0.480 | 0.700 | 1.204 | 0.180 | 0.424 | 0.244 |
| 2-Methylpentane | 41 | 0.600 | 0.790 | 1.210 | 1.810 | 2.400 | 4.280 | 0.560 | 1.424 | 0.795 |
| 2-Pentanone/Isovaleraldeh | 23 | 0.000 | 0.072 | 0.158 | 0.209 | 0.395 | 0.499 | 0.000 | 0.166 | 0.138 |
| 3,6-Dimethyloctane | 41 | 0.000 | 0.000 | 0.020 | 0.040 | 0.060 | 0.086 | 0.000 | 0.024 | 0.025 |
| 3-Ethyltoluene | 41 | 0.180 | 0.260 | 0.350 | 0.520 | 0.844 | 1.830 | 0.160 | 0.452 | 0.342 |
| 3-Methyl-1-pentene | 41 | 0.000 | 0.000 | 0.000 | 0.040 | 0.060 | 0.100 | 0.000 | 0.021 | 0.028 |
| 3-Methylheptane | 40 | 0.080 | 0.108 | 0.140 | 0.178 | 0.351 | 0.518 | 0.070 | 0.175 | 0.110 |
| 3-Methylhexane | 41 | 0.210 | 0.300 | 0.370 | 0.560 | 0.810 | 1.366 | 0.200 | 0.475 | 0.285 |
| 3-Methylpentane | 41 | 0.430 | 0.550 | 0.940 | 1.390 | 1.950 | 3.470 | 0.410 | 1.089 | 0.718 |
| 4-Ethyltoluene | 41 | 0.110 | 0.140 | 0.190 | 0.270 | 0.424 | 1.010 | 0.090 | 0.249 | 0.181 |
| 4-Methyl-1-pentene | 41 | 0.000 | 0.000 | 0.000 | 0.040 | 0.060 | 0.080 | 0.000 | 0.019 | 0.026 |
| 4-Methylheptane | 41 | 0.040 | 0.050 | 0.060 | 0.080 | 0.144 | 0.226 | 0.030 | 0.078 | 0.046 |
| Acetaldehyde | 33 | 0.834 | 1.138 | 1.572 | 1.974 | 2.614 | 3.449 | 0.759 | 1.670 | 0.679 |
| Acetone | 33 | 1.703 | 2.233 | 3.128 | 4.529 | 6.339 | 7.457 | 1.554 | 3.600 | 1.669 |
| Acetylene | 41 | 0.972 | 1.307 | 1.846 | 2.552 | 3.908 | 6.698 | 0.872 | 2.190 | 1.273 |
| Acrolein | 33 | 0.000 | 0.000 | 0.038 | 0.077 | 0.123 | 0.189 | 0.000 | 0.054 | 0.054 |
| Benzaldehyde | 33 | 0.067 | 0.088 | 0.116 | 0.176 | 0.247 | 0.347 | 0.060 | 0.141 | 0.073 |
| Benzene | 41 | 0.780 | 0.980 | 1.392 | 1.840 | 2.800 | 8.354 | 0.690 | 1.753 | 1.378 |
| Benzylchloride | 41 | 0.020 | 0.030 | 0.050 | 0.060 | 0.060 | 0.070 | 0.020 | 0.044 | 0.015 |
| Bromodichloromethane | 24 | 0.000 | 0.060 | 0.075 | 0.080 | 0.107 | 0.120 | 0.000 | 0.067 | 0.036 |
| Bromoform | 41 | 0.030 | 0.030 | 0.040 | 0.060 | 0.060 | 0.070 | 0.020 | 0.045 | 0.015 |
| Bromomethane | 41 | 0.090 | 0.100 | 0.130 | 0.180 | 0.210 | 0.310 | 0.090 | 0.144 | 0.052 |
| Butane | 41 | 2.080 | 2.620 | 3.780 | 5.650 | 7.590 | 12.370 | 1.180 | 4.503 | 2.596 |
| Carbontetrachloride | 41 | 0.560 | 0.600 | 0.660 | 0.700 | 0.720 | 0.780 | 0.440 | 0.648 | 0.069 |
| Chlorobenzene | 41 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

## Table 52 VOC Annual Statistics at Windsor (1999)

**Unit =micrograms/m$^3$**

| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| Hexanal | 33 | 0.037 | 0.103 | 0.154 | 0.232 | 0.416 | 1.420 | 0.000 | 0.236 | 0.268 |
| Hexane | 41 | 0.480 | 0.650 | 0.980 | 1.550 | 2.680 | 5.240 | 0.460 | 1.418 | 1.205 |
| Hexylbenzene | 41 | 0.000 | 0.000 | 0.000 | 0.030 | 0.050 | 0.084 | 0.000 | 0.015 | 0.023 |
| Indane | 41 | 0.050 | 0.060 | 0.100 | 0.180 | 0.310 | 0.530 | 0.050 | 0.135 | 0.105 |
| Isobutane | 41 | 0.970 | 1.300 | 1.540 | 2.342 | 3.224 | 6.540 | 0.600 | 1.942 | 1.147 |
| iso-Butylbenzene | 41 | 0.016 | 0.020 | 0.030 | 0.030 | 0.040 | 0.070 | 0.010 | 0.029 | 0.013 |
| Isopentane | 41 | 1.910 | 2.250 | 2.930 | 4.060 | 5.360 | 9.600 | 1.830 | 3.469 | 1.729 |
| Isoprene | 37 | 0.050 | 0.060 | 0.090 | 0.200 | 0.668 | 1.920 | 0.044 | 0.229 | 0.359 |
| iso-Propylbenzene | 41 | 0.040 | 0.050 | 0.060 | 0.070 | 0.110 | 0.190 | 0.030 | 0.066 | 0.030 |
| m and p-Xylene | 41 | 0.670 | 1.150 | 1.510 | 2.110 | 3.560 | 18.610 | 0.580 | 2.202 | 2.842 |
| MEK | 33 | 0.433 | 0.699 | 1.016 | 1.971 | 4.465 | 5.058 | 0.301 | 1.665 | 1.446 |
| Methylcyclohexane | 41 | 0.110 | 0.140 | 0.180 | 0.250 | 0.360 | 0.580 | 0.090 | 0.212 | 0.111 |
| Methylcyclopentane | 41 | 0.220 | 0.280 | 0.380 | 0.560 | 0.980 | 1.540 | 0.180 | 0.480 | 0.304 |
| MIBK | 33 | 0.000 | 0.063 | 0.180 | 0.283 | 0.596 | 2.059 | 0.000 | 0.269 | 0.382 |
| m-Tolualdehyde | 33 | 0.000 | 0.000 | 0.000 | 0.000 | 0.072 | 0.100 | 0.000 | 0.015 | 0.032 |
| Naphthalene | 26 | 0.180 | 0.243 | 0.315 | 1.385 | 2.173 | 3.710 | 0.180 | 0.879 | 1.025 |
| n-Butylbenzene | 41 | 0.030 | 0.030 | 0.040 | 0.060 | 0.080 | 0.160 | 0.020 | 0.052 | 0.031 |
| Nonane | 41 | 0.090 | 0.120 | 0.160 | 0.210 | 0.400 | 0.590 | 0.070 | 0.203 | 0.130 |
| n-Propylbenzene | 41 | 0.076 | 0.100 | 0.120 | 0.170 | 0.262 | 0.580 | 0.060 | 0.155 | 0.103 |
| Octane | 41 | 0.090 | 0.120 | 0.150 | 0.200 | 0.420 | 0.660 | 0.070 | 0.199 | 0.129 |
| o-Tolualdehyde | 33 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| o-Xylene | 41 | 0.250 | 0.380 | 0.480 | 0.690 | 1.170 | 6.220 | 0.210 | 0.724 | 0.946 |
| p-Cymene | 41 | 0.030 | 0.040 | 0.060 | 0.090 | 0.140 | 0.390 | 0.000 | 0.079 | 0.063 |
| Pentane | 41 | 1.020 | 1.250 | 1.620 | 2.080 | 2.640 | 5.140 | 0.940 | 1.831 | 0.859 |
| Propane | 41 | 2.350 | 3.340 | 5.170 | 16.240 | 24.470 | 50.622 | 1.690 | 10.077 | 10.182 |
| Propionaldehyde | 33 | 0.265 | 0.327 | 0.385 | 0.546 | 0.741 | 0.941 | 0.223 | 0.460 | 0.190 |
| Propylene | 41 | 0.410 | 0.520 | 0.660 | 1.020 | 1.420 | 2.160 | 0.370 | 0.839 | 0.453 |
| p-Tolualdehyde | 33 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.061 | 0.000 | 0.002 | 0.011 |
| sec-Butylbenzene | 41 | 0.020 | 0.020 | 0.030 | 0.036 | 0.040 | 0.080 | 0.010 | 0.031 | 0.015 |
| Styrene | 37 | 0.000 | 0.080 | 0.120 | 0.140 | 0.230 | 0.400 | 0.000 | 0.124 | 0.086 |
| tert-Butylbenzene | 41 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.040 | 0.000 | 0.010 | 0.014 |
| Tetrachloroethylene | 41 | 0.140 | 0.200 | 0.260 | 0.390 | 0.520 | 0.920 | 0.130 | 0.318 | 0.174 |
| Toluene | 41 | 1.180 | 1.900 | 2.620 | 4.120 | 7.640 | 15.344 | 1.060 | 3.558 | 2.824 |
| trans-1,2-Dichloroethylene | 41 | 0.000 | 0.000 | 0.020 | 0.040 | 0.040 | 0.050 | 0.000 | 0.020 | 0.017 |
| trans-1,2-Dimethylcyclohe: | 41 | 0.020 | 0.034 | 0.042 | 0.060 | 0.120 | 0.270 | 0.000 | 0.059 | 0.049 |
| trans-1,3-Dichloropropene | 38 | 0.000 | 0.000 | 0.000 | 0.020 | 0.030 | 0.510 | 0.000 | 0.022 | 0.082 |
| trans-1,4-Dimethylcyclohe: | 41 | 0.020 | 0.020 | 0.030 | 0.030 | 0.060 | 0.120 | 0.010 | 0.034 | 0.021 |

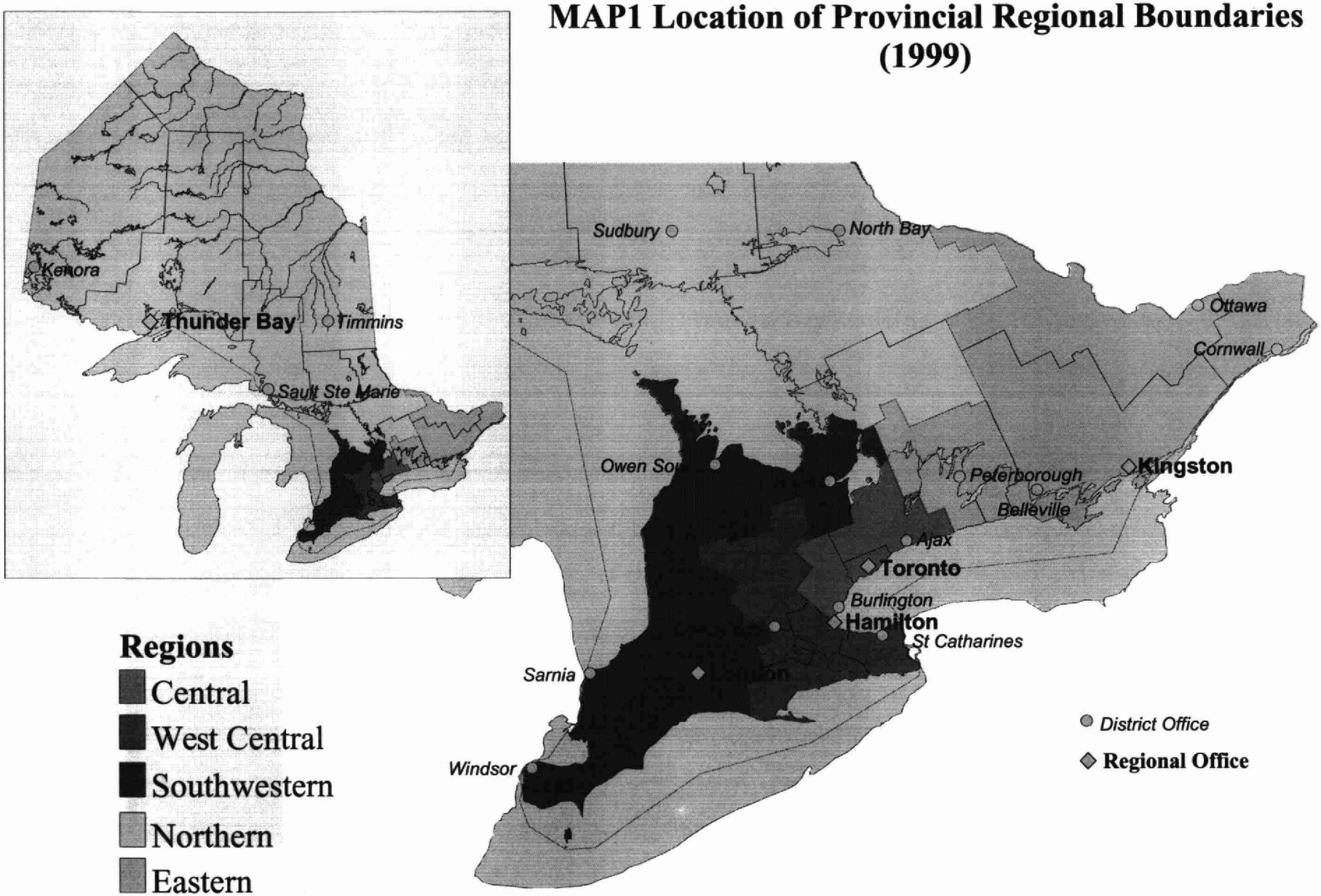
## Table 52 VOC Annual Statistics at Windsor (1999)

**Unit =micrograms/m$^3$**

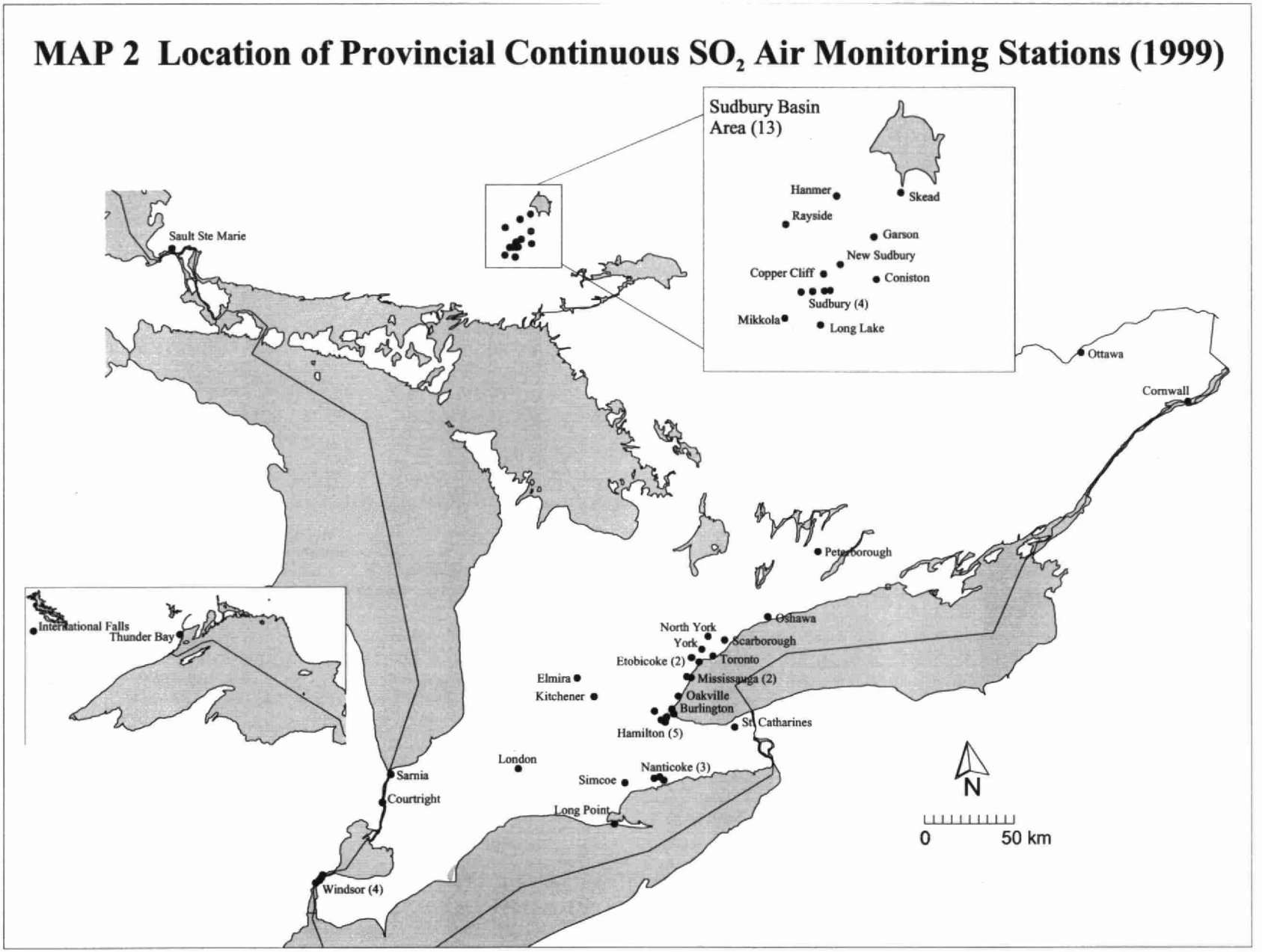
| | | PERCENTILES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Compounds** | **No. of Samples** | **5%** | **25%** | **50%** | **75%** | **90%** | **Max.** | **Min.** | **Mean** | **Std. Dev.** |
| trans-2-Butene | 41 | 0.070 | 0.090 | 0.110 | 0.170 | 0.238 | 0.450 | 0.070 | 0.143 | 0.080 |
| trans-2-Heptene | 41 | 0.000 | 0.000 | 0.020 | 0.040 | 0.040 | 0.070 | 0.000 | 0.022 | 0.021 |
| trans-2-Hexene | 41 | 0.020 | 0.024 | 0.040 | 0.050 | 0.070 | 0.140 | 0.020 | 0.044 | 0.028 |
| trans-2-Octene | 21 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.050 | 0.000 | 0.005 | 0.014 |
| trans-2-Pentene | 41 | 0.040 | 0.060 | 0.100 | 0.150 | 0.210 | 0.500 | 0.030 | 0.125 | 0.099 |
| trans-3-Heptene | 41 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 | 0.020 | 0.000 | 0.002 | 0.006 |
| trans-3-Methyl-2-pentene | 41 | 0.000 | 0.000 | 0.000 | 0.030 | 0.060 | 0.130 | 0.000 | 0.021 | 0.032 |
| trans-4-Methyl-2-pentene | 41 | 0.000 | 0.000 | 0.000 | 0.020 | 0.070 | 0.178 | 0.000 | 0.019 | 0.041 |
| Trichloroethylene | 41 | 0.060 | 0.100 | 0.120 | 0.180 | 0.230 | 0.360 | 0.060 | 0.147 | 0.074 |
| Undecane | 41 | 0.120 | 0.140 | 0.184 | 0.300 | 0.560 | 0.762 | 0.080 | 0.253 | 0.179 |
| Valeraldehyde | 33 | 0.024 | 0.112 | 0.162 | 0.205 | 0.509 | 0.652 | 0.000 | 0.202 | 0.167 |
| Vinylchloride | 41 | 0.000 | 0.010 | 0.020 | 0.030 | 0.040 | 0.040 | 0.000 | 0.021 | 0.012 |

*Note: VOC sites are operated by Environment Canada.*

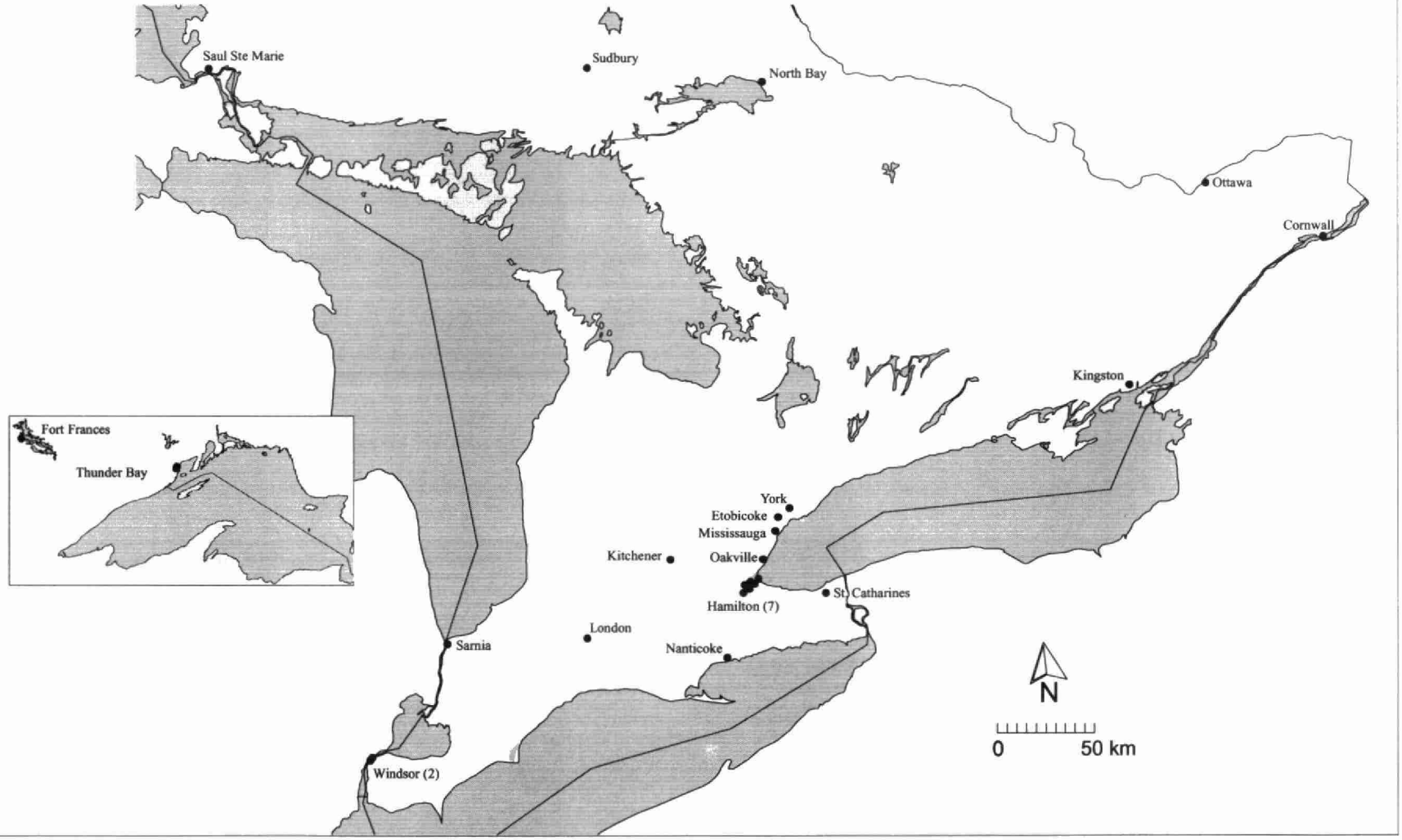
# MAP1 Location of Provincial Regional Boundaries (1999)



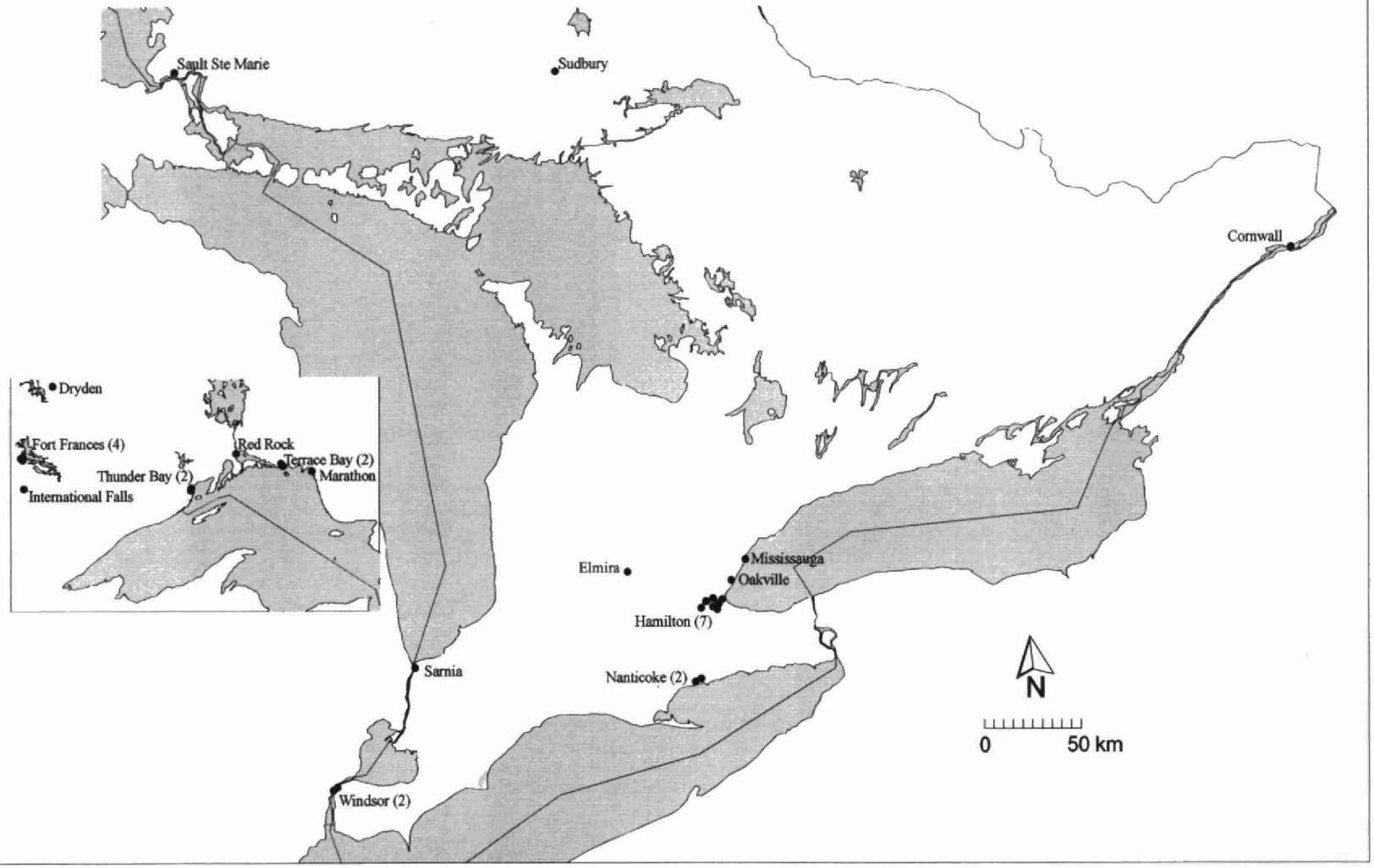
# MAP 2 Location of Provincial Continuous $SO_2$ Air Monitoring Stations (1999)



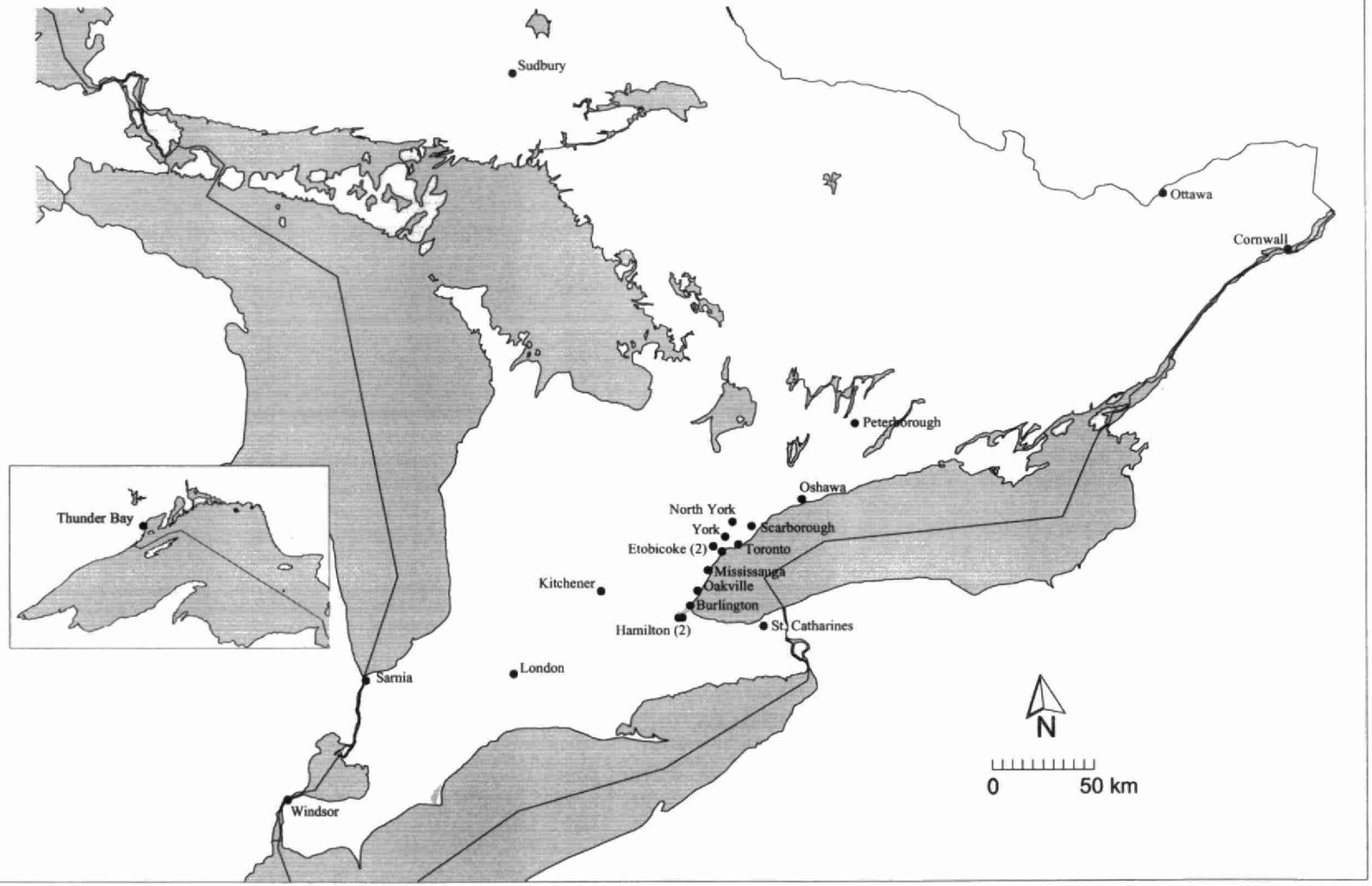
# MAP 3 Location of Provincial Continuous SP (as COH) Air Monitoring Stations (1999)



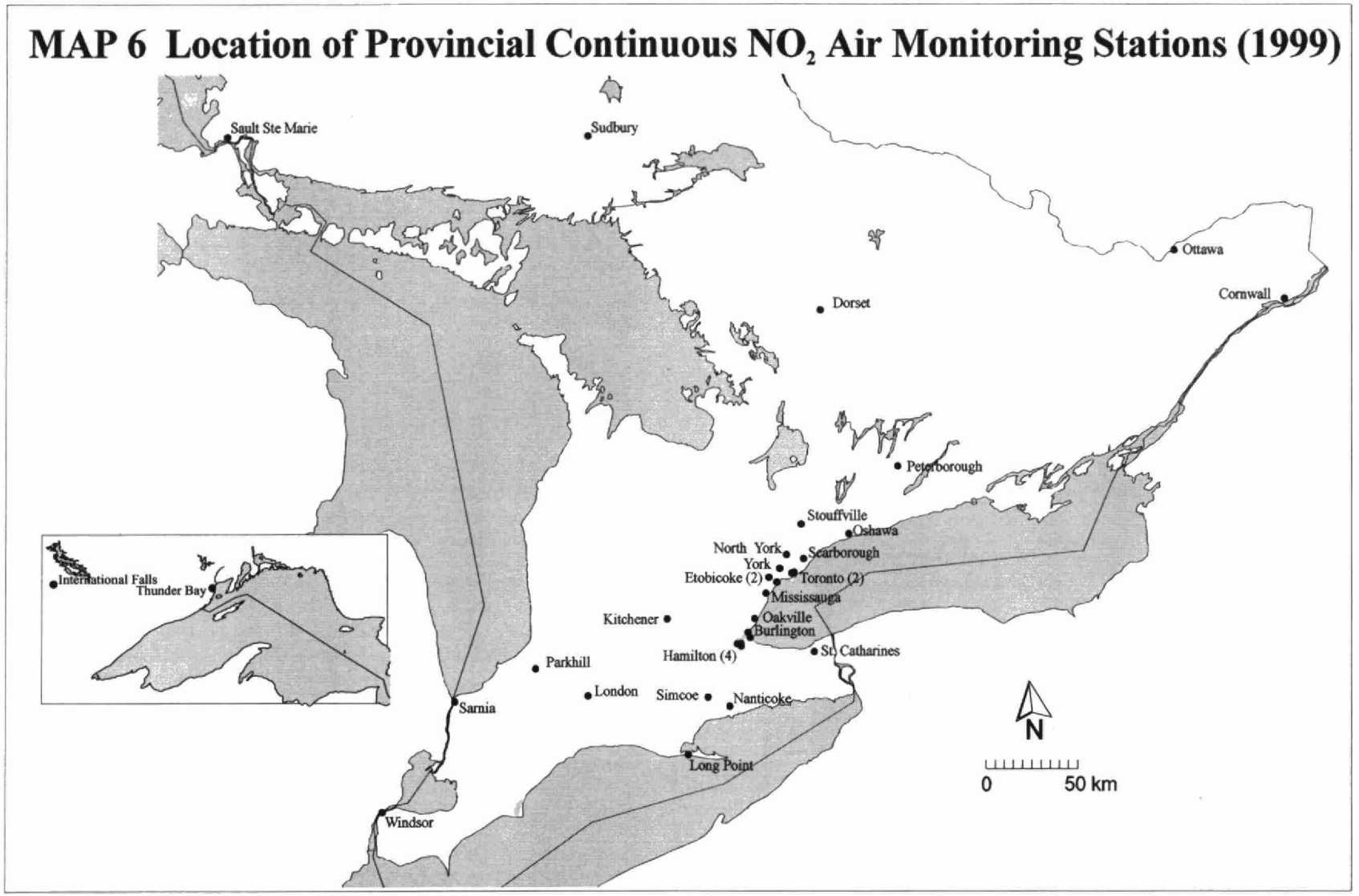
# MAP 4 Location of Provincial Continuous TRS Air Monitoring Stations (1999)



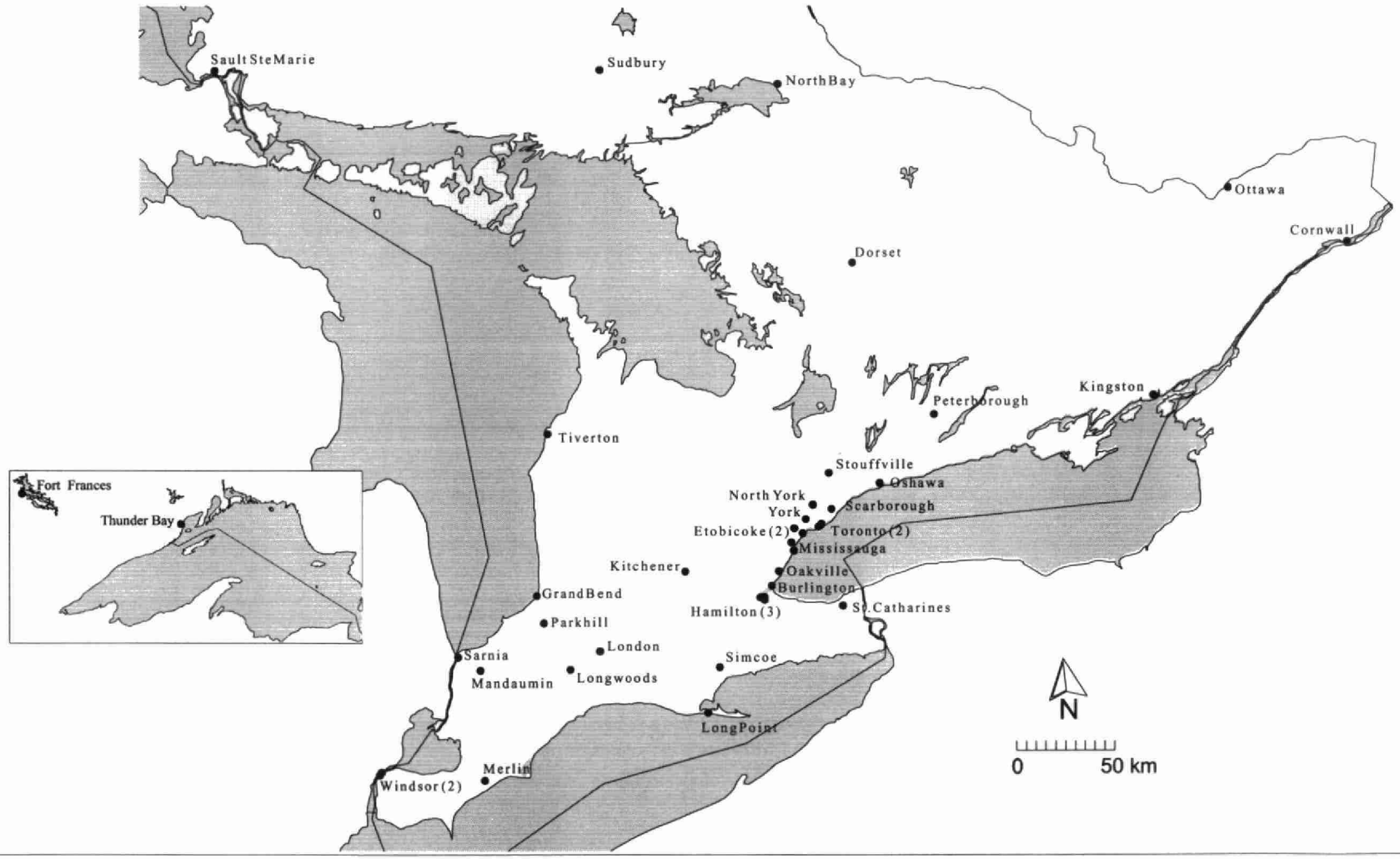
# Map 5 Location of Provincial Continuous CO Air Monitoring Stations (1999)



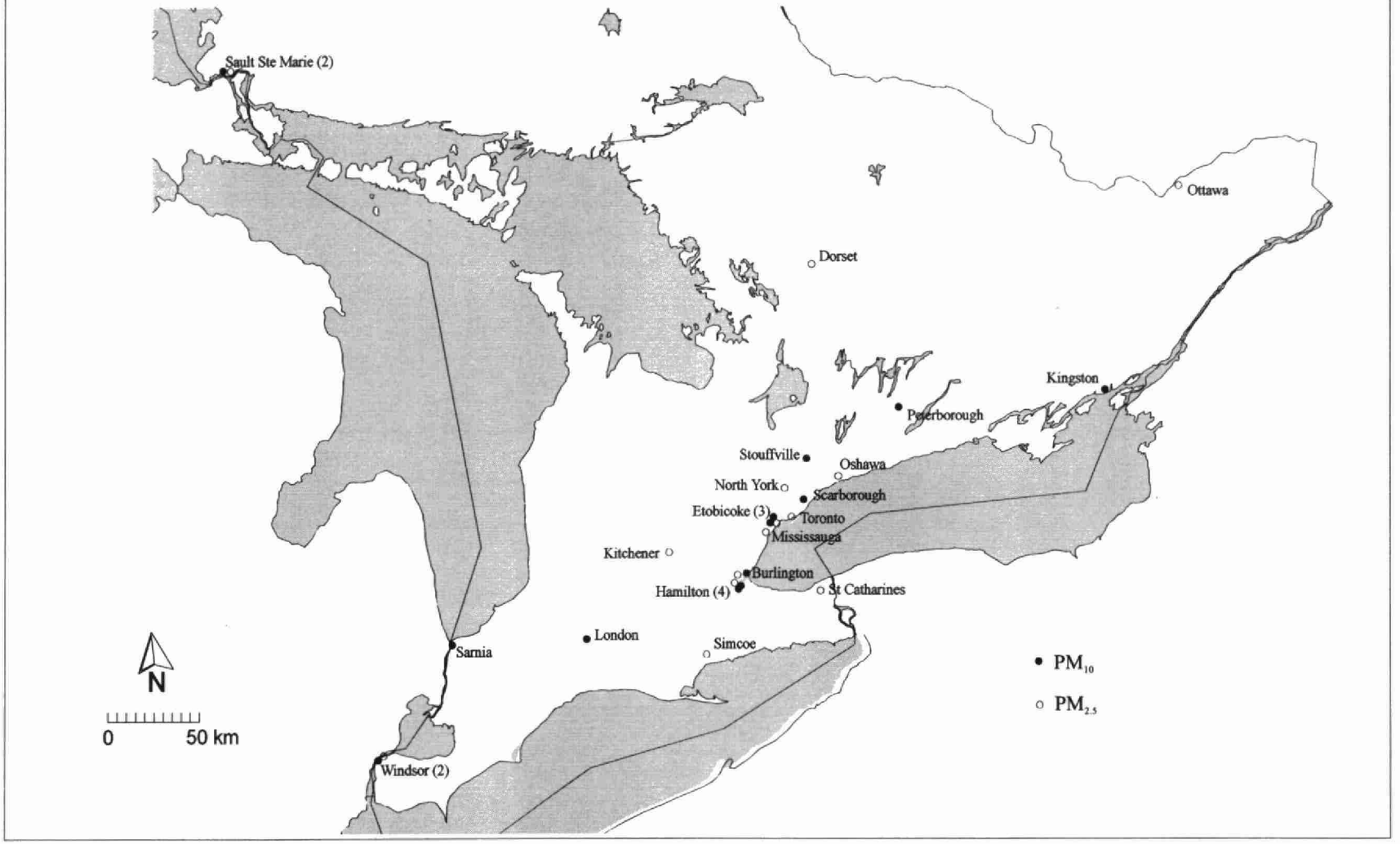
# MAP 6 Location of Provincial Continuous $NO_2$ Air Monitoring Stations (1999)



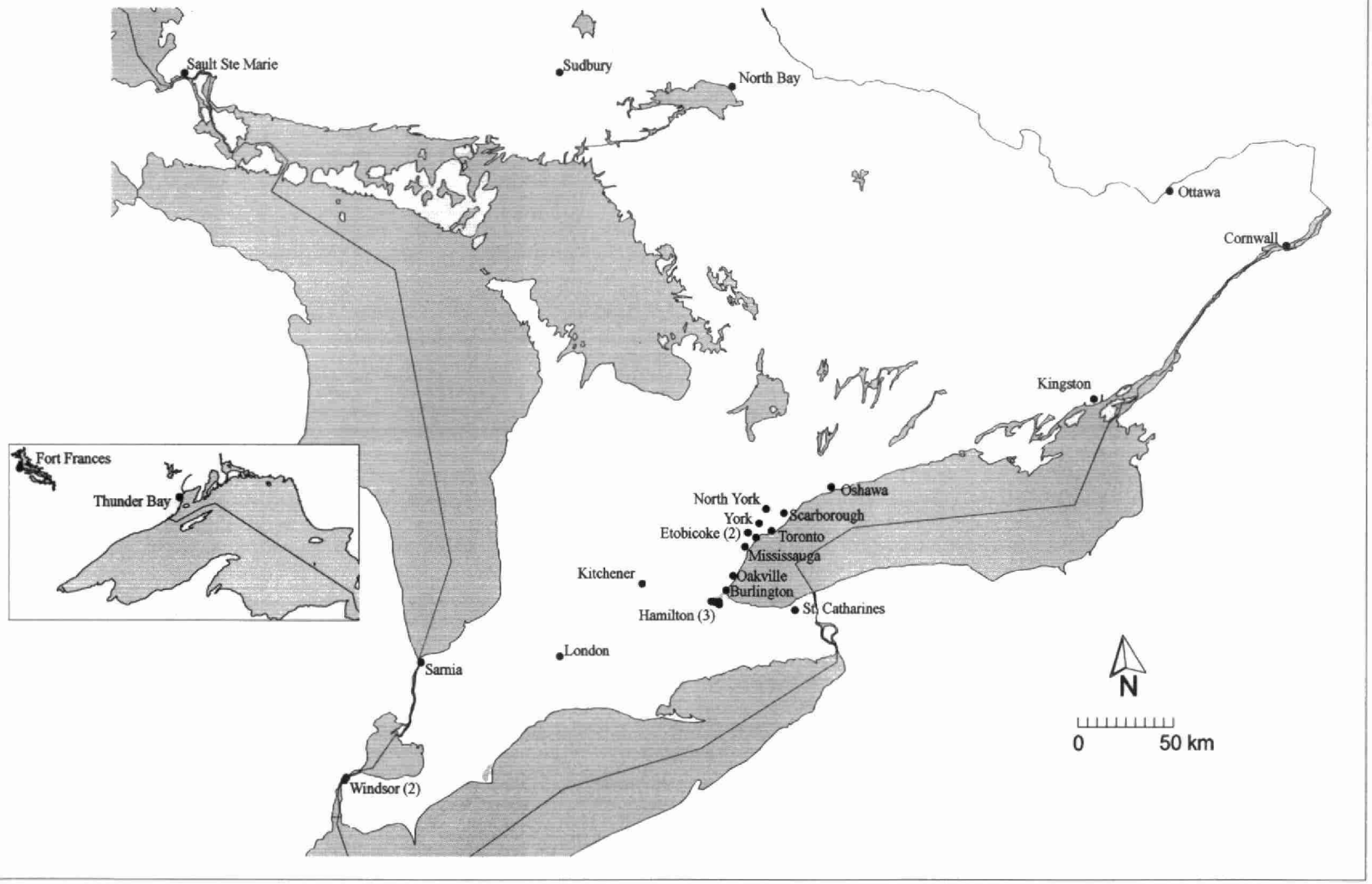
# MAP 7 Location of Provincial Continuous $O_3$ Air Monitoring Stations (1999)



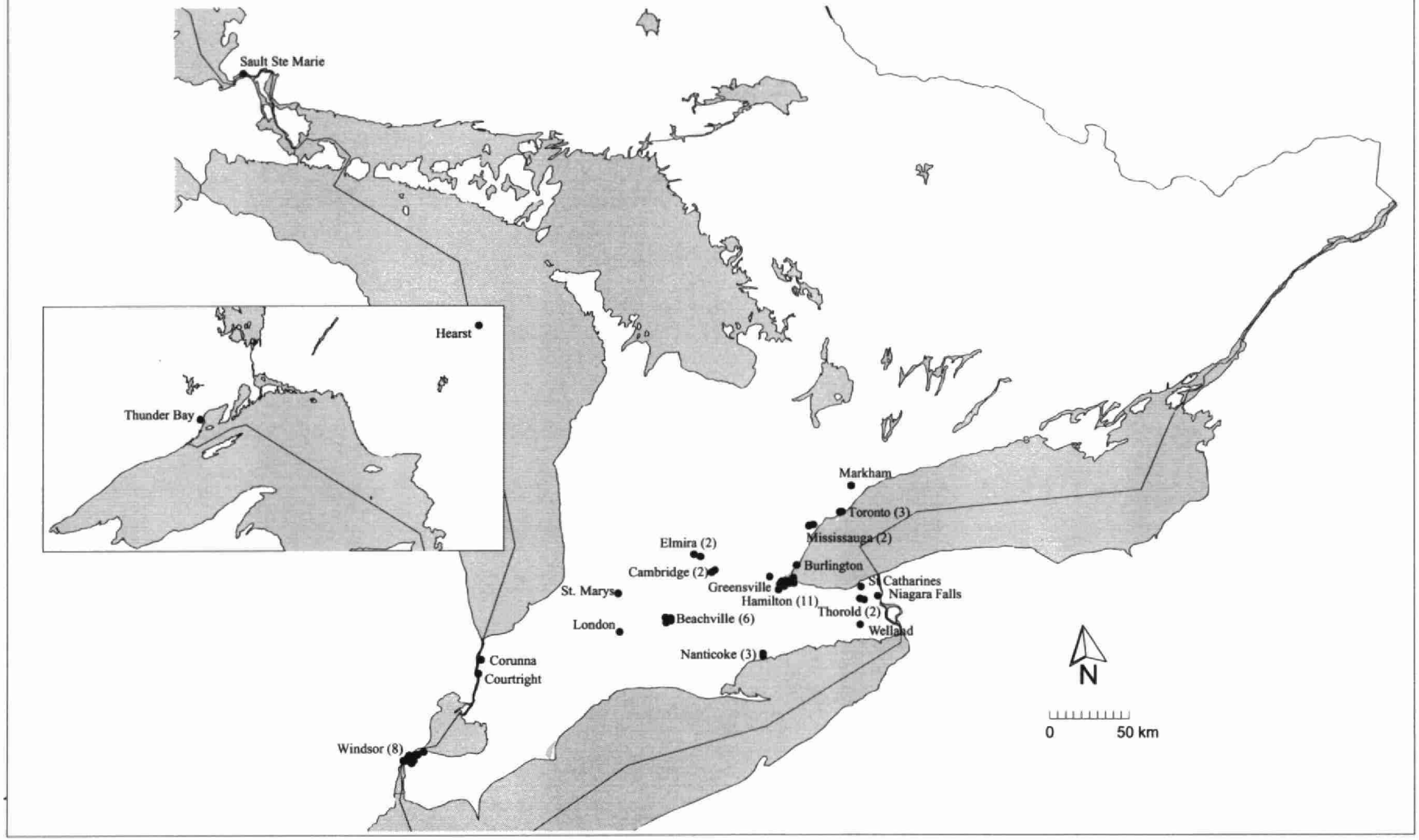
# MAP 8 Location of Provincial Continuous $PM_{10/2.5}$ Air Monitoring Stations (1999)



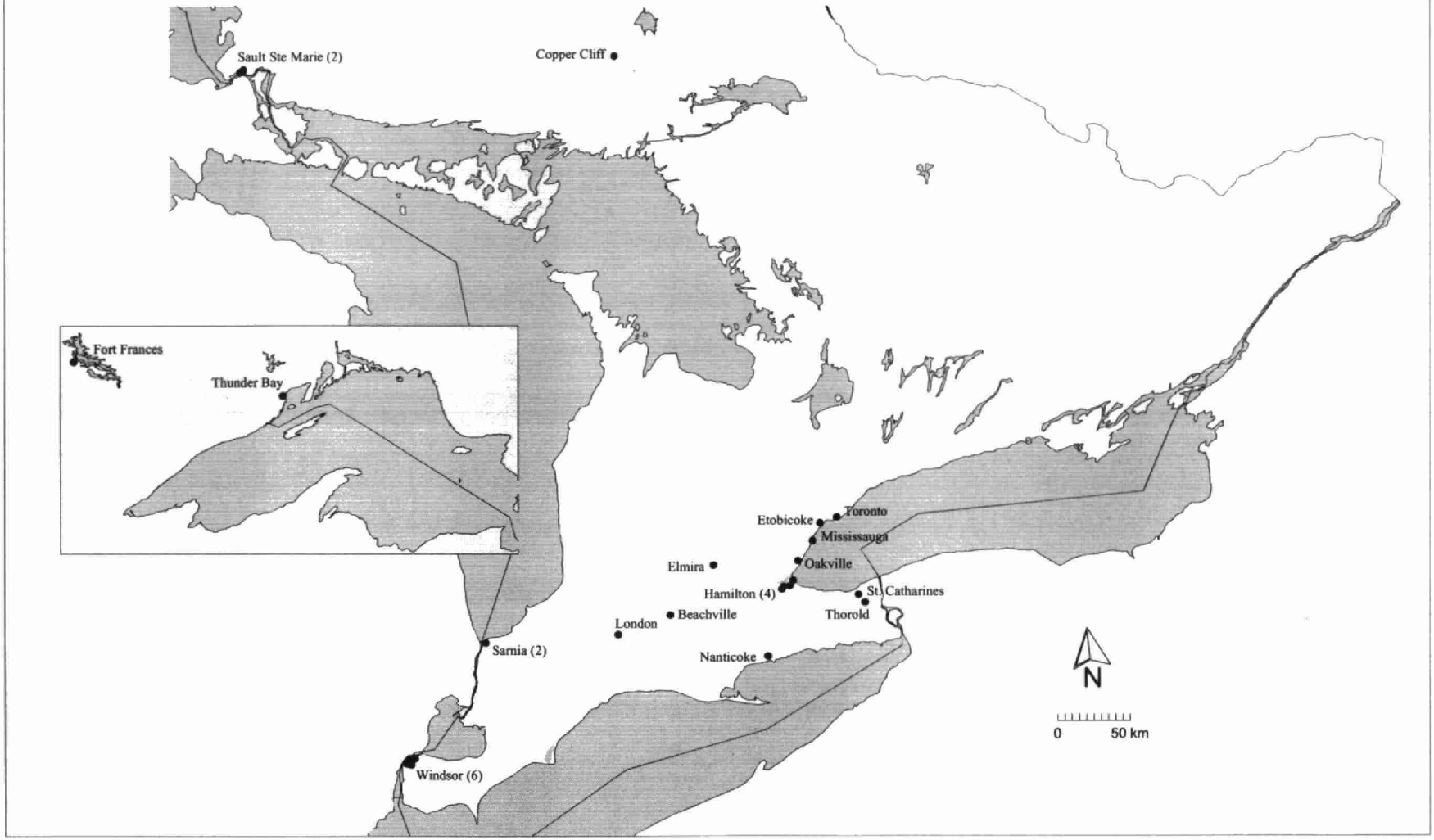
# Map 9 Location of Provincial Continuous AQI Air Monitoring Stations (1999)



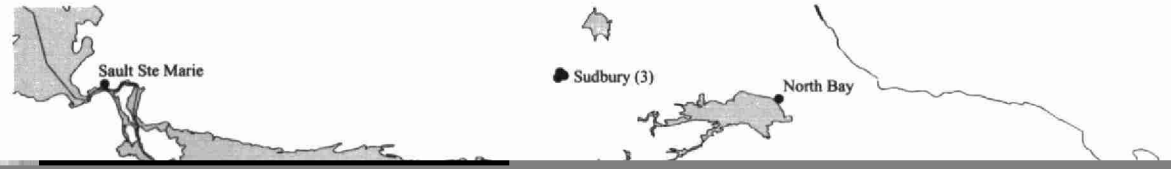
# MAP 10 Location of Provincial 24-Hour TSP Air Monitoring Stations (1999)



# MAP 11 Location of Provincial 24-Hour $PM_{10}$ Air Monitoring Stations (1999)



# MAP 12 Location of Provincial Continuous MET Air Monitoring Stations (1999)



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